

ENVIRONMENTAL FATE STUDIES ON CERTAIN MUNITION WASTEWATER CONSTITUENTS

Phase III, Part I, Appendix 1

Final Report

By

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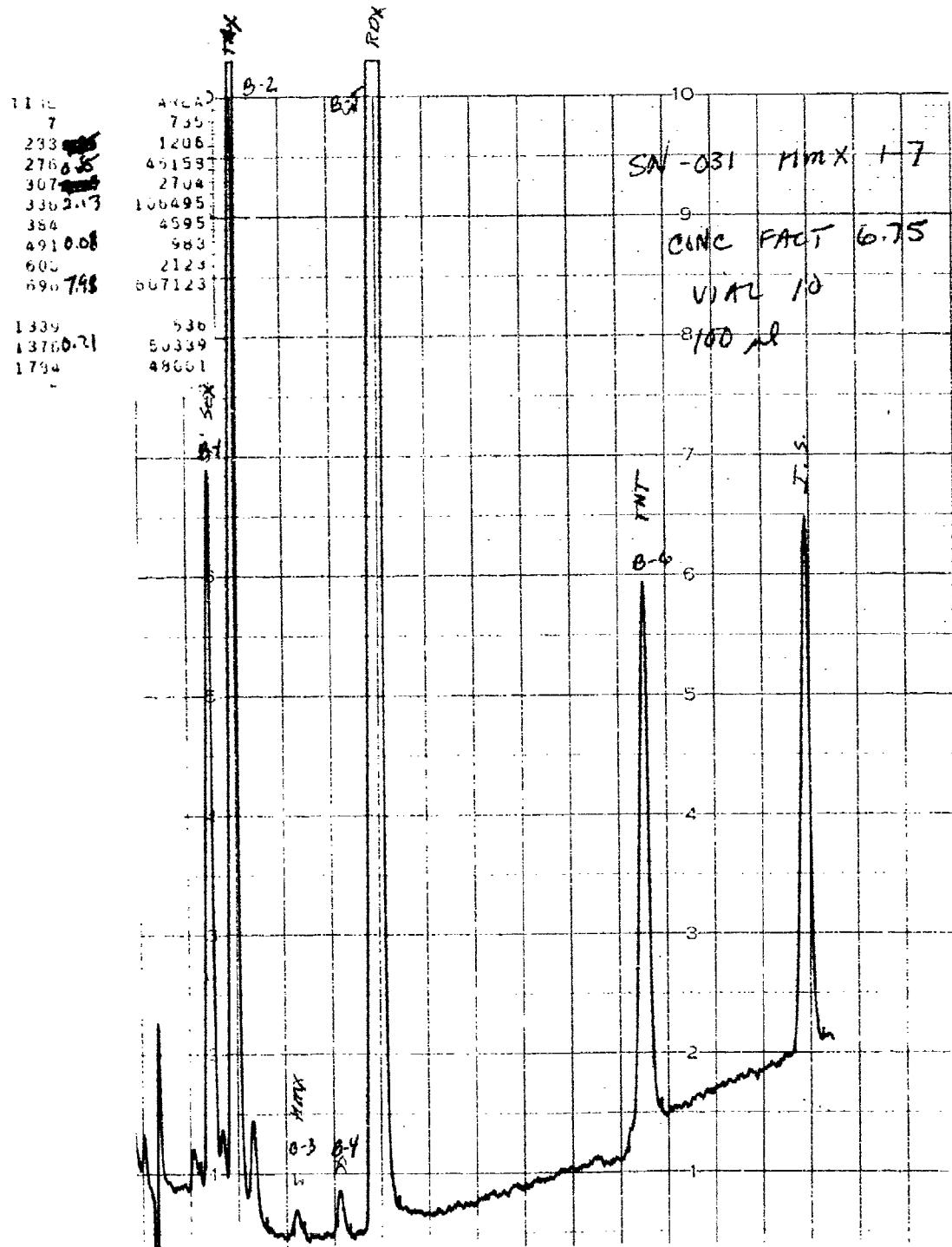
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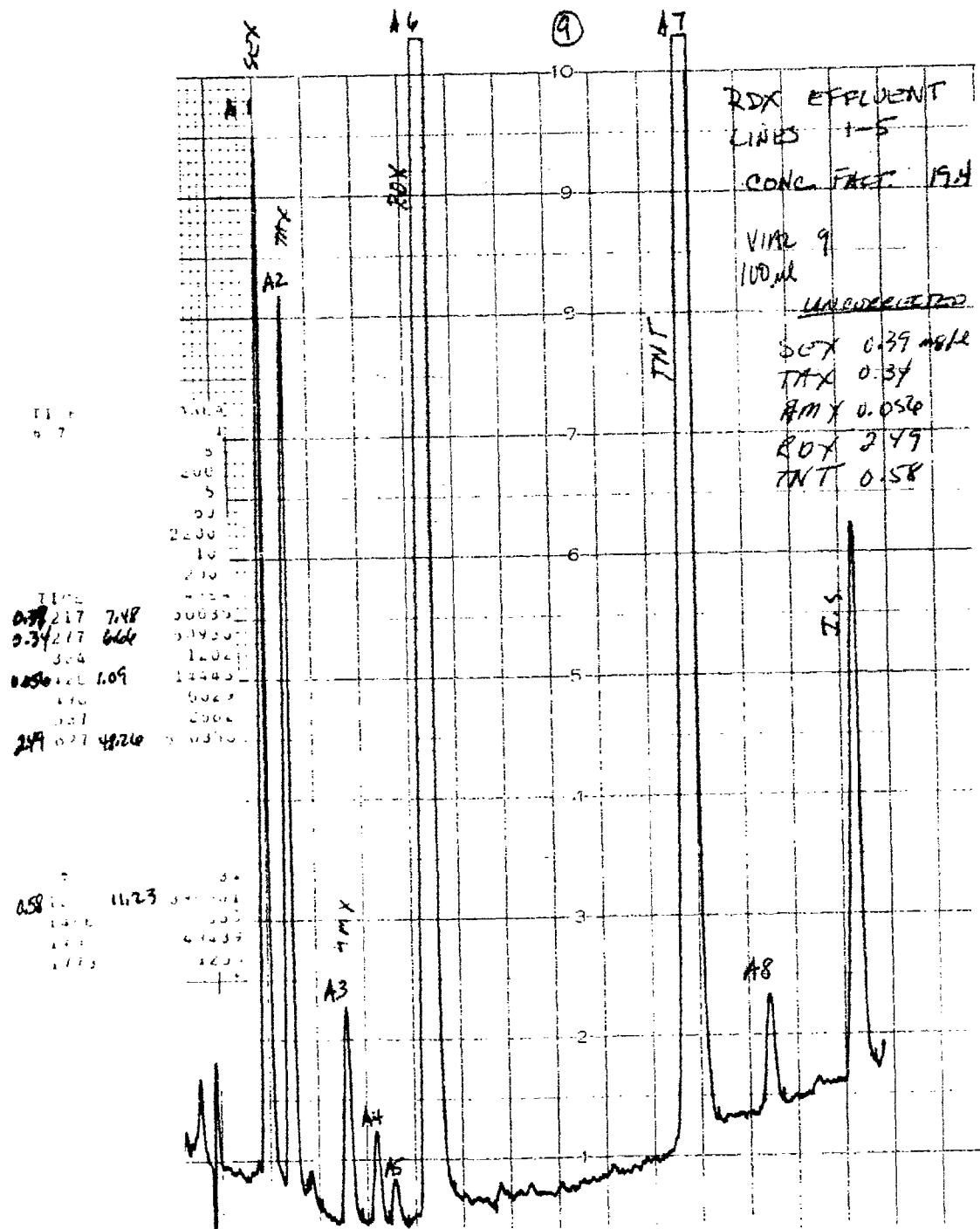


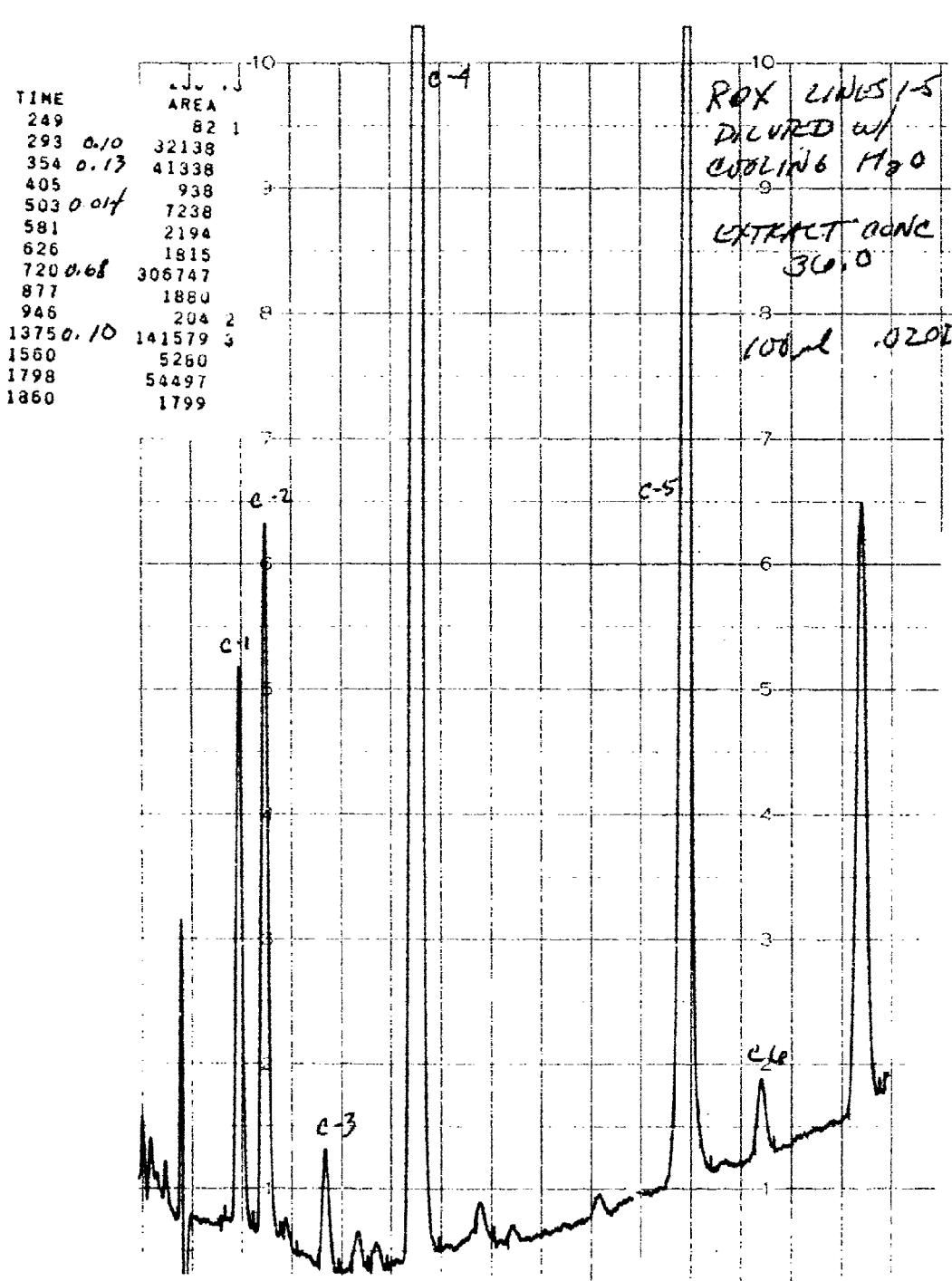
I. INTRODUCTION

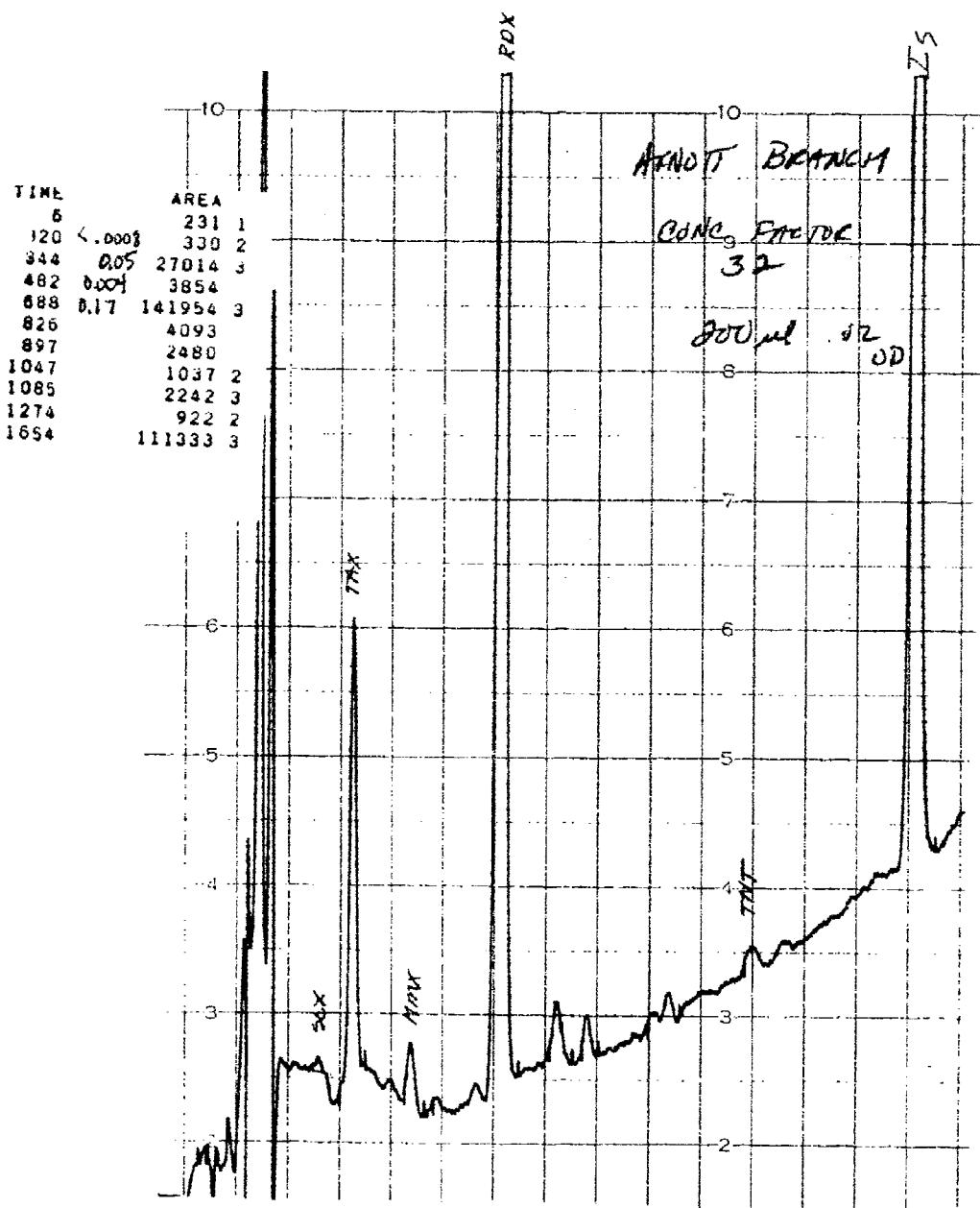
This appendix contains the high-pressure liquid chromatographic profiles of Holston Army Ammunition waste streams and Holston River extracts that were used in support of the Model Validation study. The conditions of the analyses and the analytical results appear in the Phase III-Part I report.

II. Chromatographic Profile

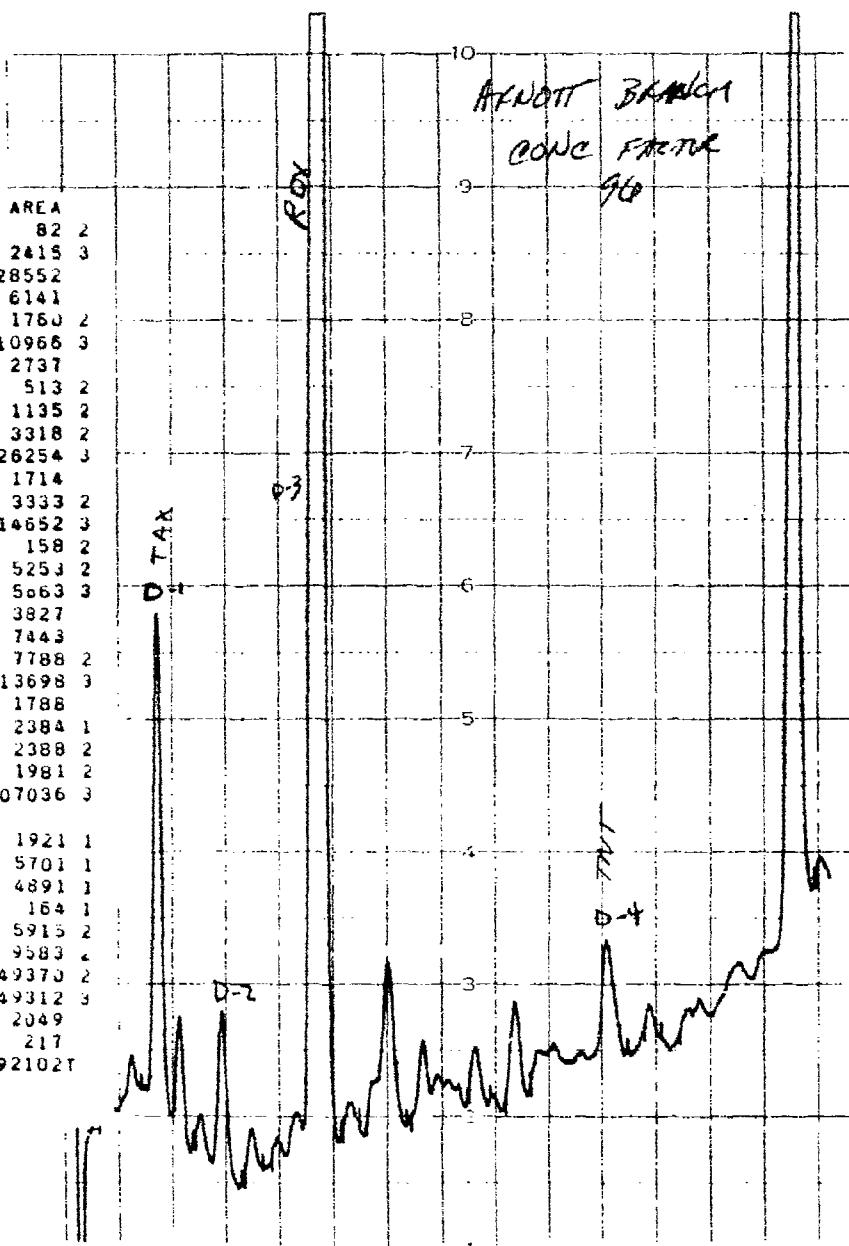


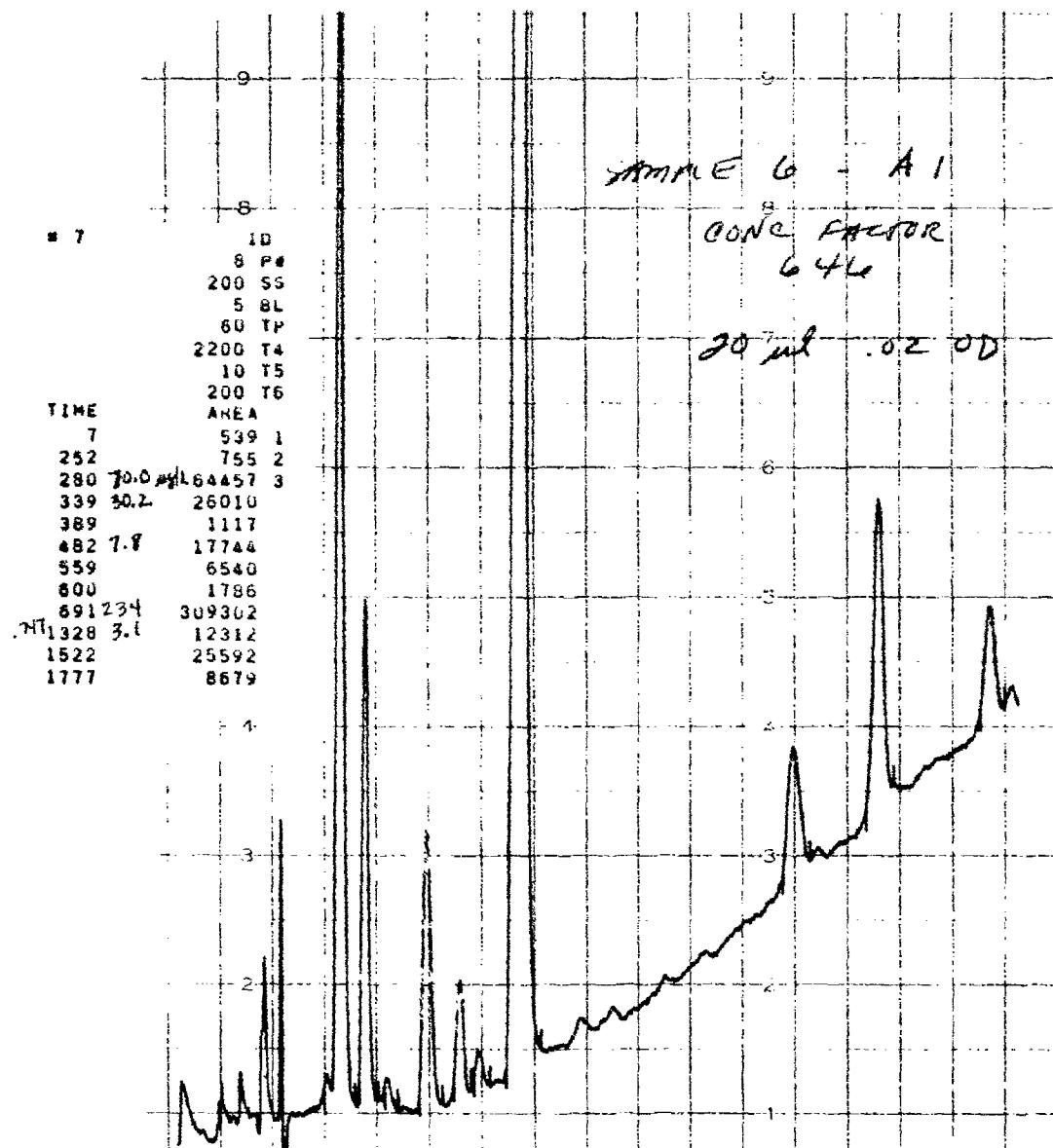






TIME	AREA
206	82 2
278	2415 3
334	28552
386	6141
431	1760 2
479	10966 3
547	2737
599	513 2
607	1135 2
646	3318 2
691	426254 3
764	1714
822	3333 2
856	14652 3
908	158 2
935	5253 2
965	5663 3
1052	3827
1142	7443
1192	7788 2
1349	.002 13698 3
1460	1788
1517	2384 1
1554	2388 2
1619	1981 2
1763	107036 3
1823	1921 1
1854	5701 1
1868	4891 1
1885	164 1
1899	5915 2
1917	9583 2
1952	49370 2
2065	149312 3
2120	2049
2159	217
	892102T

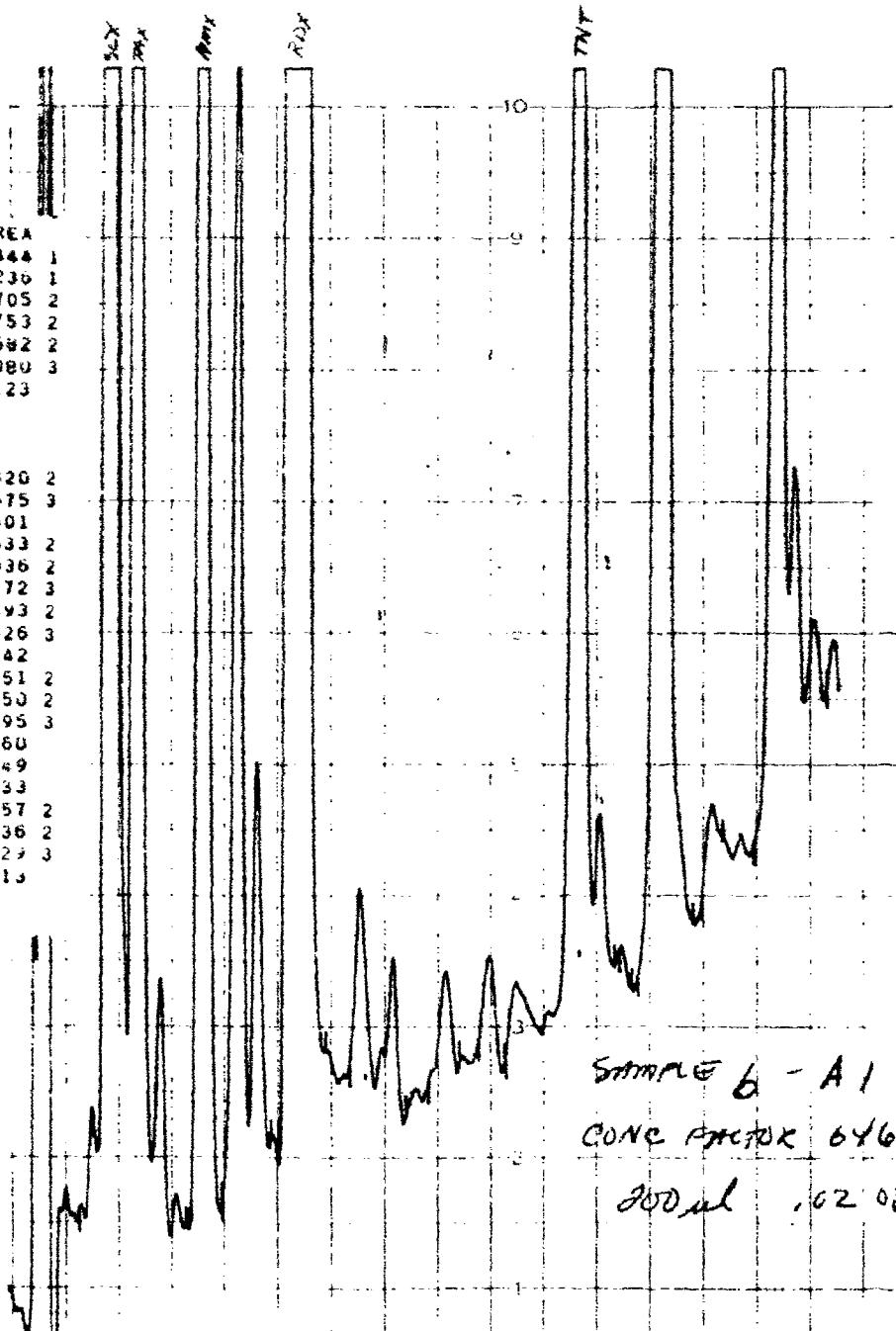




TIME AREA

211	444	1
240	6230	1
276 57.14	1705	2
337 20.0	295753	2
393	16582	2
431	2080	3
489 6.17	195123	

589	84820	2
613	27575	3
696 77.8	3134501	
648	18033	2
898	3036	2
924	10672	3
1012	493	2
1045	10026	3
1144	9442	
1205	9851	2
1344 2.9	157050	2
1398	12395	3
441	860	
1533	309849	
1649	5433	
1794 4.5	119957	2
1837	23436	2
1879	8529	3
1923	3113	



TIME	AREA
272	56714 2
325	33462 3
370	1412
579	872
611	7245 2
663	43243 3
871	31815
1140	1620 2
1273	14609 3
1598	8874
1681	2830 2
1737	100342 3

SEX

77X

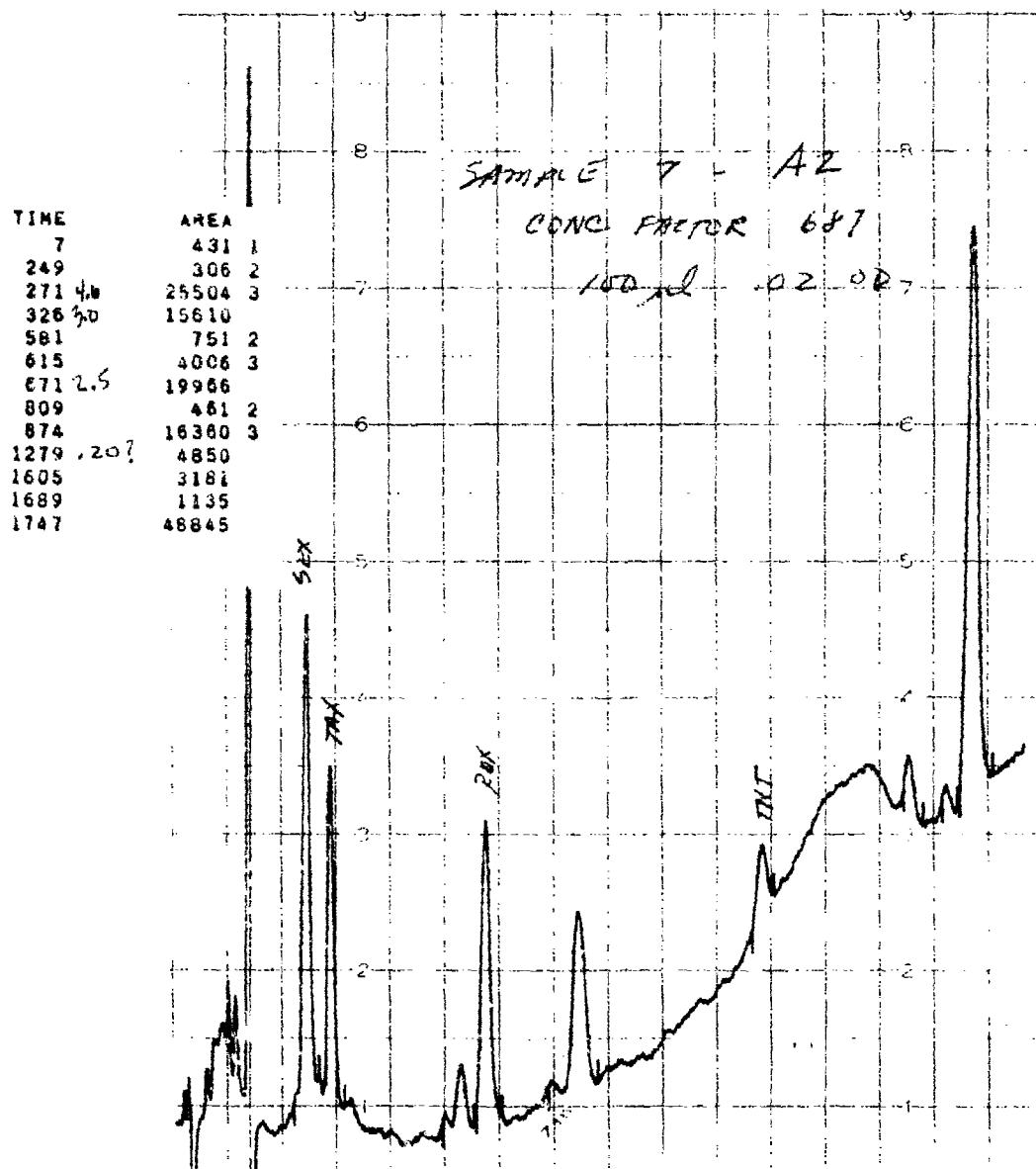
ROX

NR

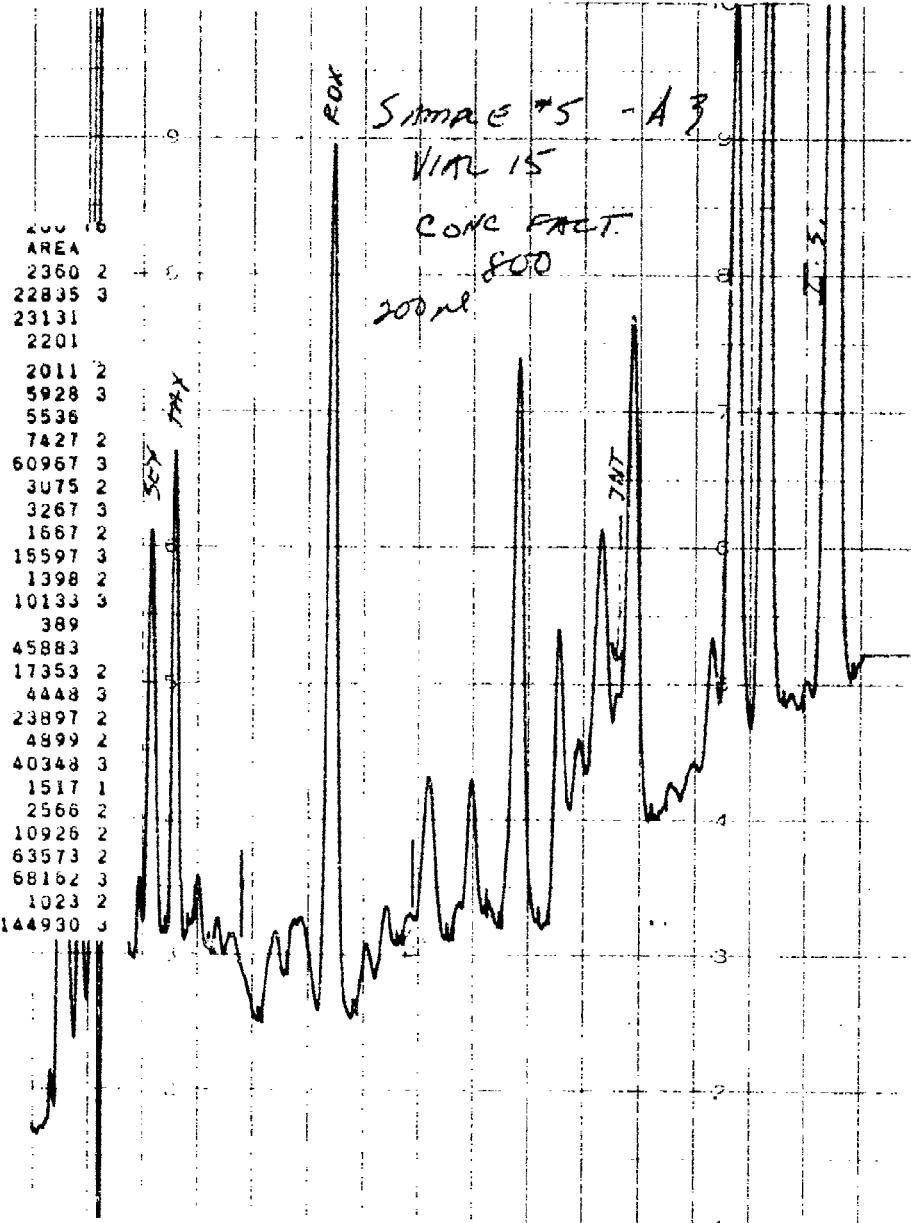
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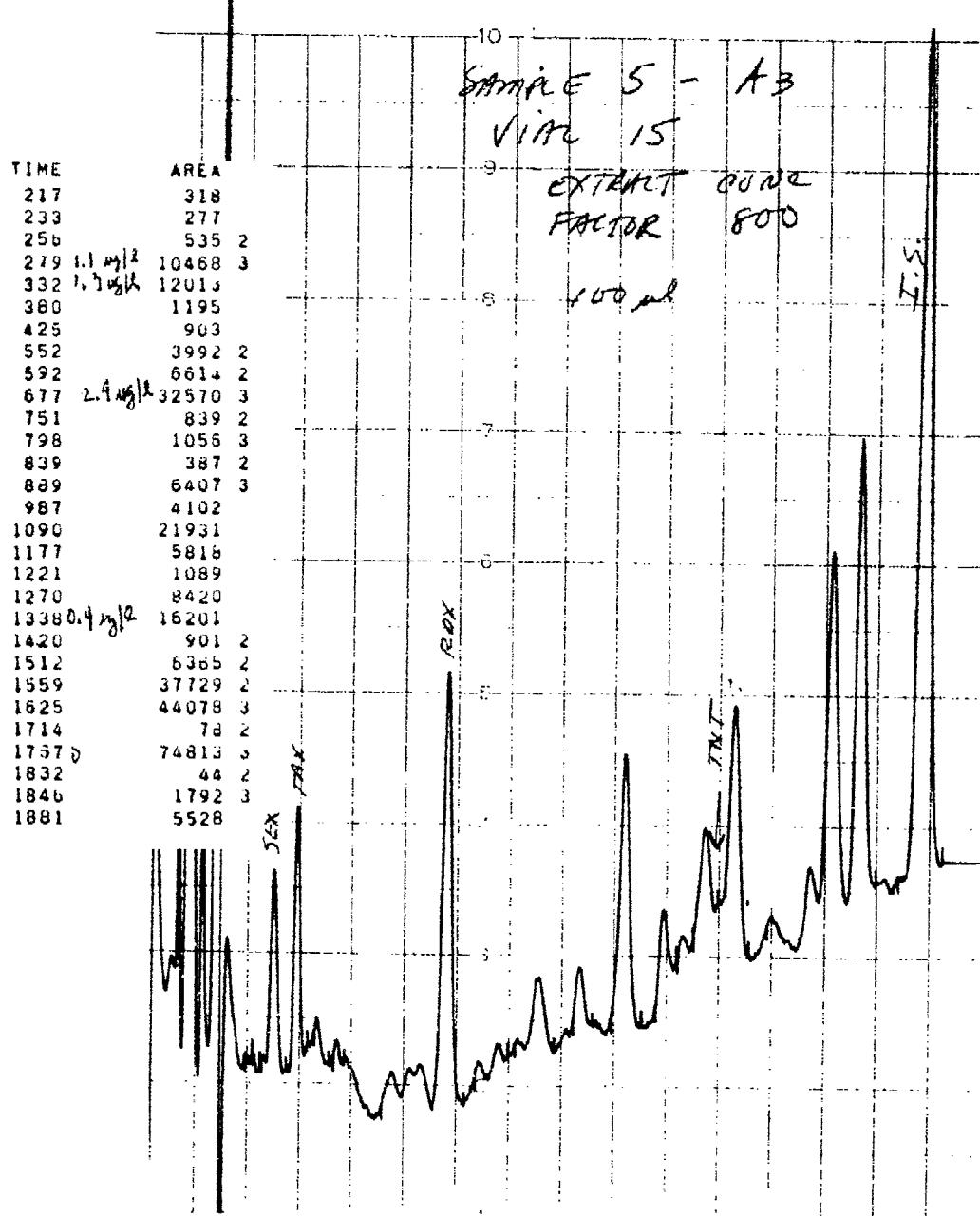
Sample 7 - A2
CONC FACTOR 6.87

200 μ l INT



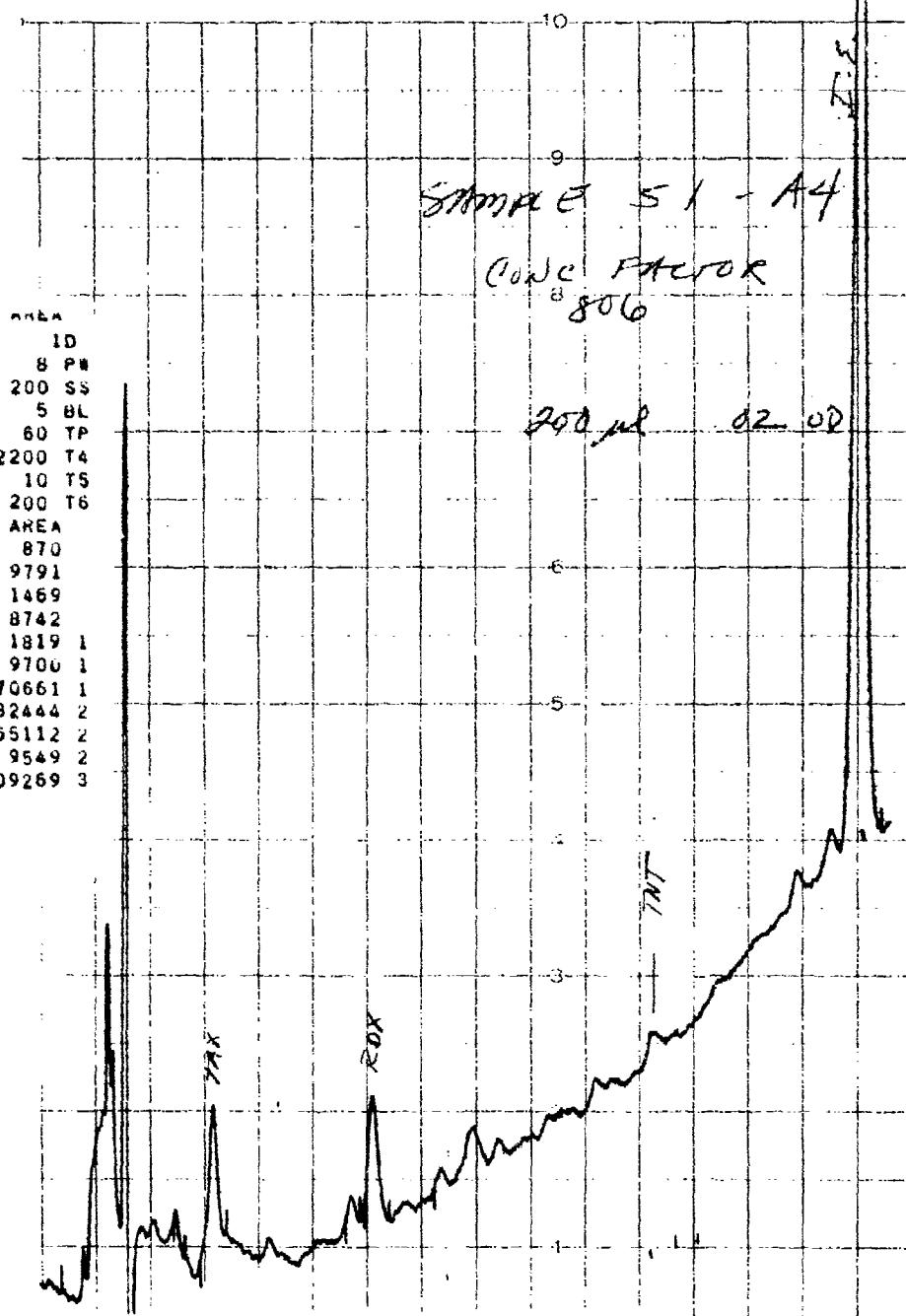
TIME
 252 1.2
 276 22835 3
 329 23131
 378 2201
 421 2011 2
 448 5928 3
 548 5536
 589 7427 2
 670 60967 3
 745 3075 2
 790 3267 3
 836 1567 2
 883 15597 3
 945 1398 2
 978 10133 3
 1013 389
 1079 45883
 1167 17353 2
 1212 4448 3
 1259 23897 2
 1294 4899 2
 1326 40348 3
 1410 1517 1
 1455 2566 2
 1501 10926 2
 1544 63573 2
 1613 68162 3
 1703 1023 2
 1755 144930 3



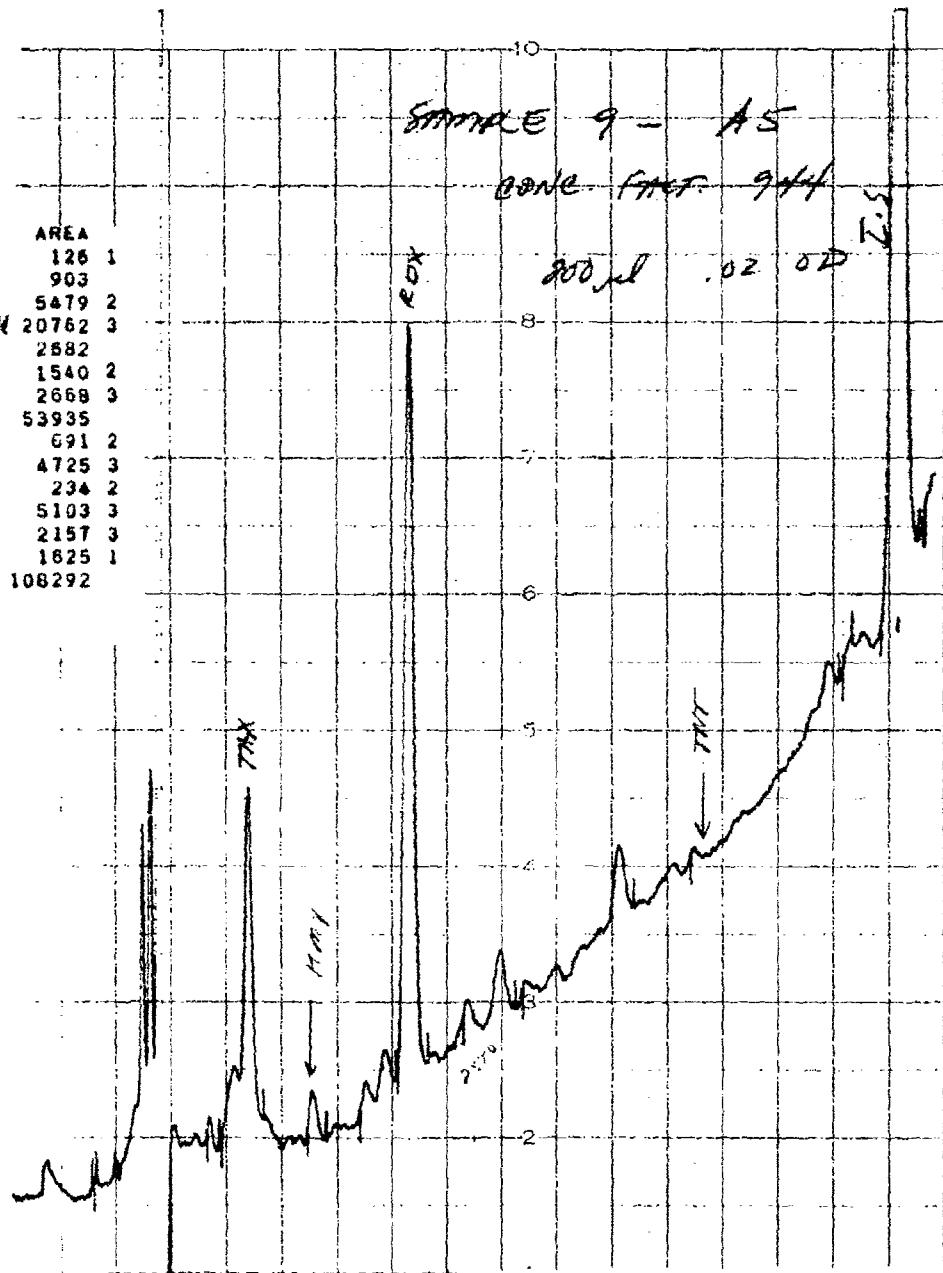


TIME
#14

TIME	AREA
257	1D
342	8 PM
645	200 SS
693	5 BL
841	60 TP
1165	2200 T4
1312	10 TS
1633	200 T6
1707	AREA
1769	870
	9791
	1469
	8742
	1819 1
	9700 1
	70661 1
	32444 2
	65112 2
	9549 2
	109269 3



TIME	AREA
6	126 1
260	903
313	5479 2
345	1.3 μ g R 20762 3
488	2582
604	1540 2
644	2668 3
697	53935
824	691 2
896	4725 3
953	234 2
1157	5103 3
1616	2157 3
1667	1625 1
1768	108292



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#12

10
8 PW
200 SS
5 BL
2200 TA
10 T5
200 T6
AREA
234 1621
323 310 8.71 9738
350 3126 2
397 1718 3
443 1778
495 1190 2
557 2165 3
591 1020
648 8341
780 4595
854 4777
906 2539 2
1031 3170 3

TIME = 13 sec

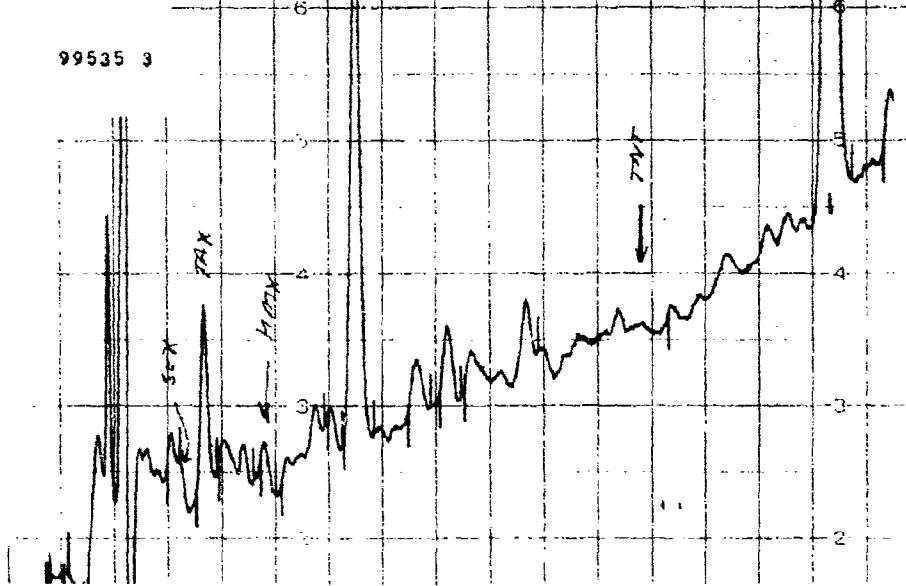
W.D. ~~448~~ 115

1121712

99535 3

SAMPLE 10 A-6
CONC FACTOR
944

T.E.

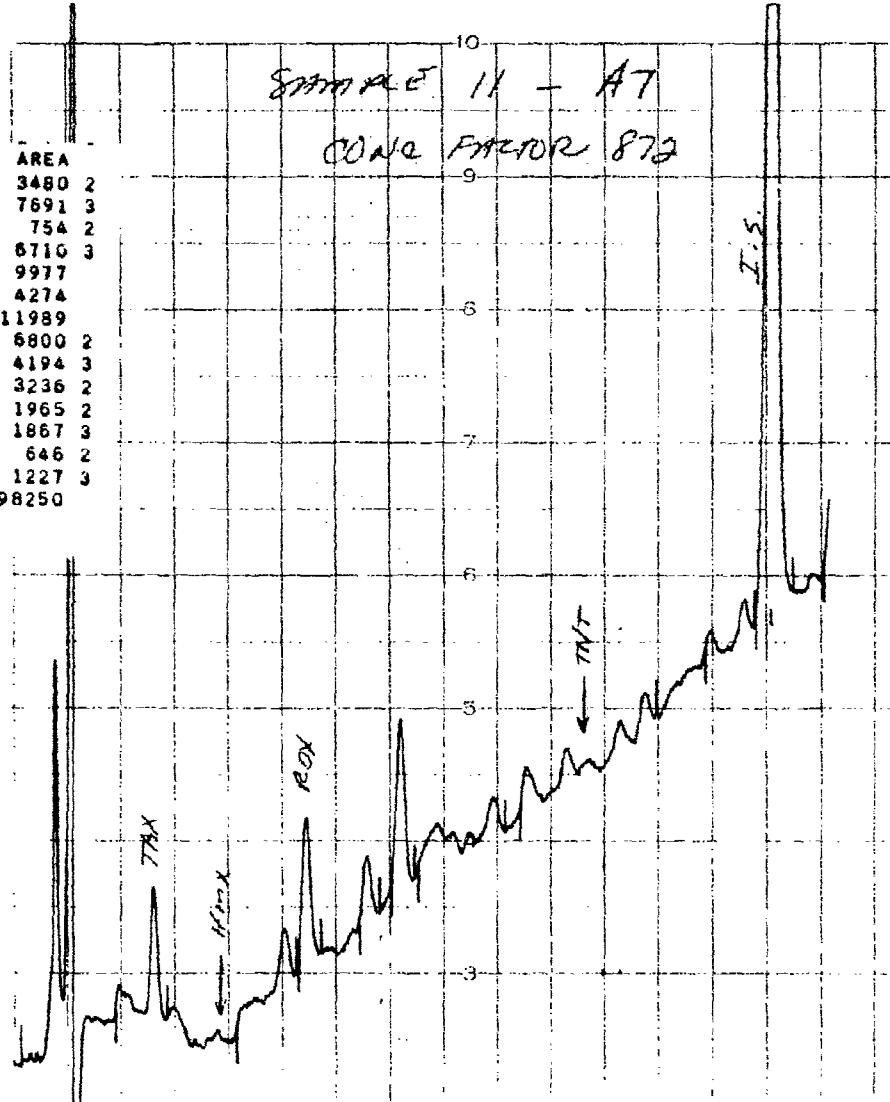


5/4/81

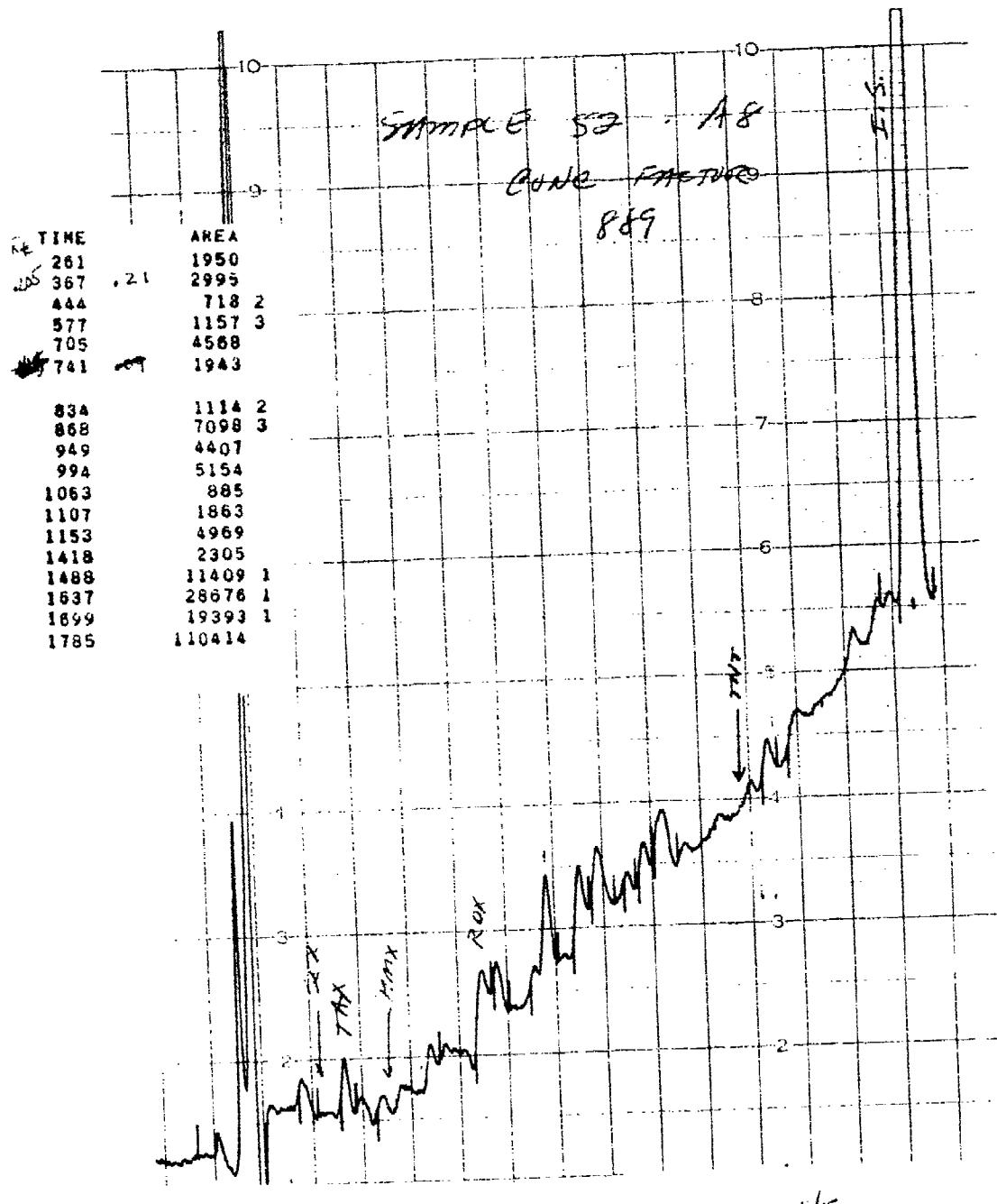
TIME
 221
 297 .61
 493
 591
 842 .64
 780
 853
 909
 1059
 1135
 1225
 1400
 1545
 1623
 1681

AREA
 3480 2
 7691 3
 754 2
 6710 3
 9977
 4274
 11989
 6800 2
 4194 3
 3236 2
 1965 2
 1867 3
 646 2
 1227 3
 98250

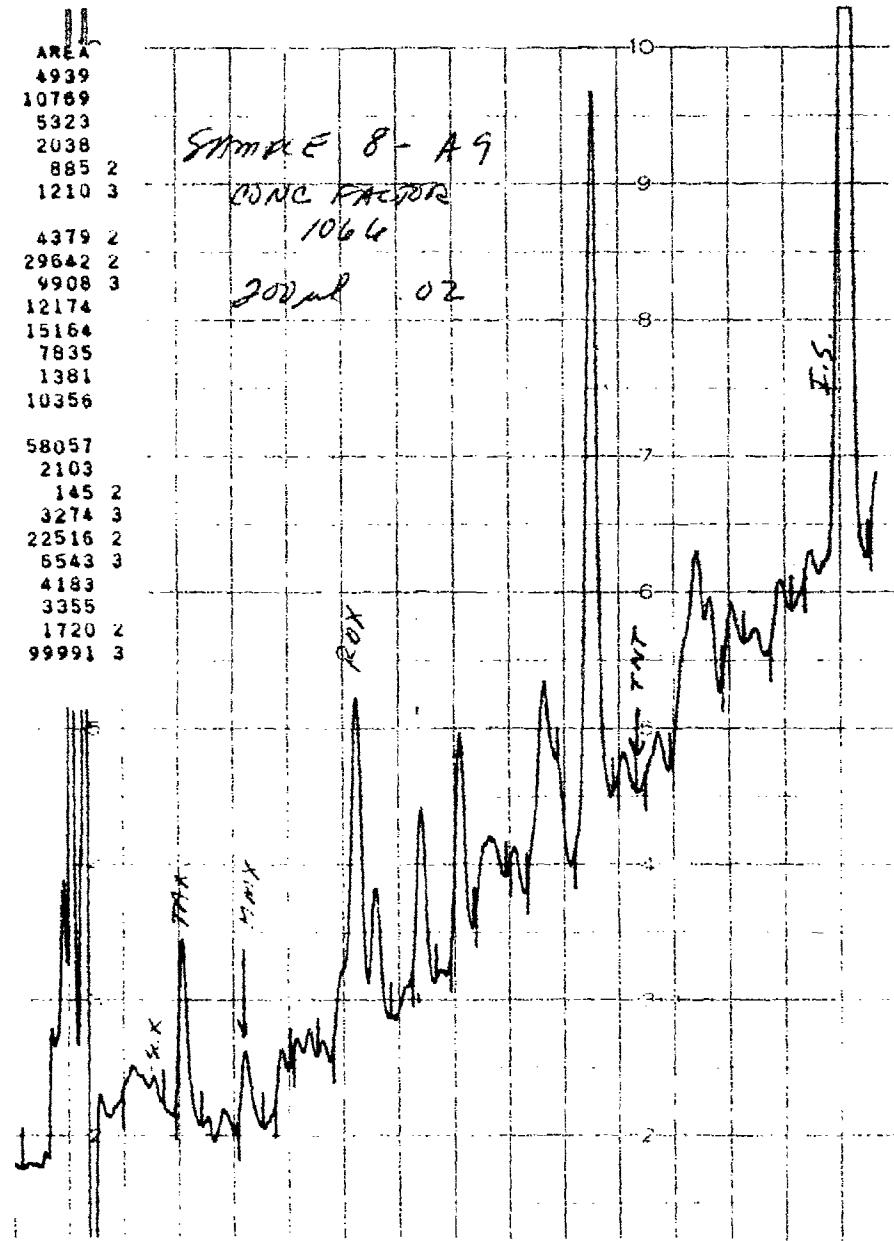
Sample 11 - A7
 WAVE FACTOR 872



14



TIME	AREA
227	4939
354	10769
491	5323
571	2038
603	885 2
631	1210 3
705	4379 2
736	29642 2
777	9908 3
877	12174
961	15164
1016	7835
1079	1381
1147	10356
1251	58057
1321	2103
1369	145 2
1397	3274 3
1482	22516 2
1509	6543 3
1558	4183
1663	3355
1727	1720 2
1802	99991 3

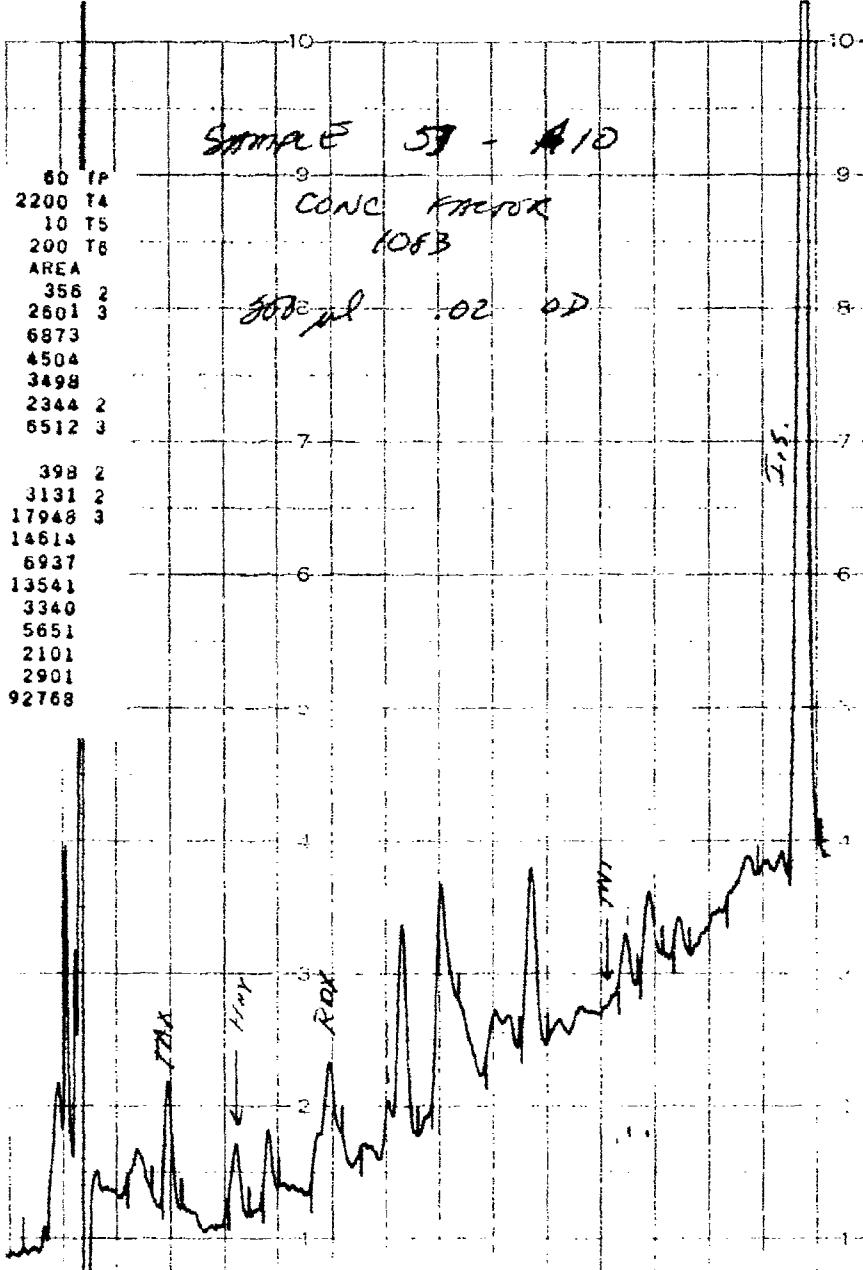


515

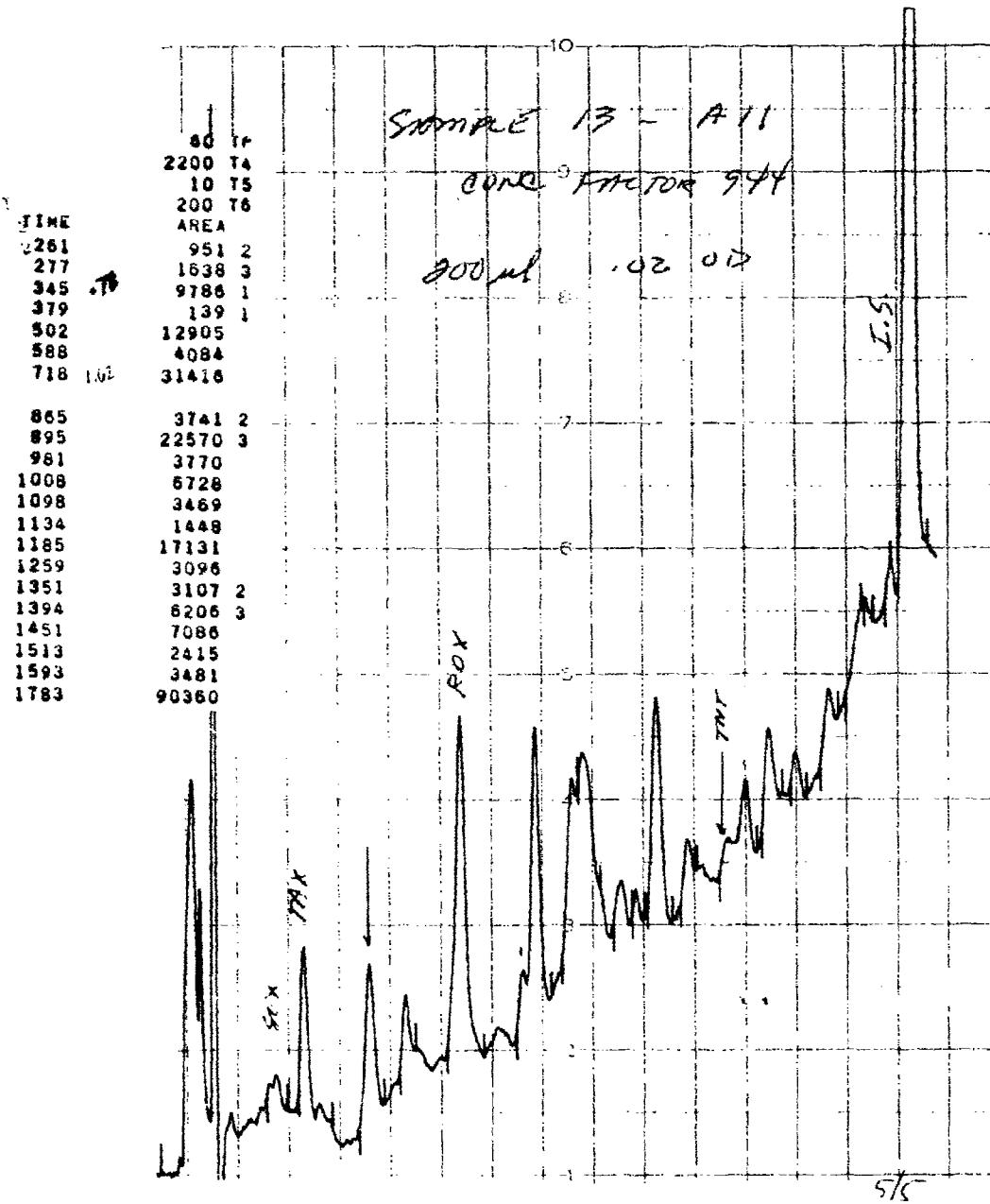
TIME
 239
 255
 327 46
 478
 553
 665
 692, 28

60 TP
 2200 T4
 10 T5
 200 T6
 AREA
 356 2
 2601 3
 6873
 4504
 3498
 2344 2
 6512 3

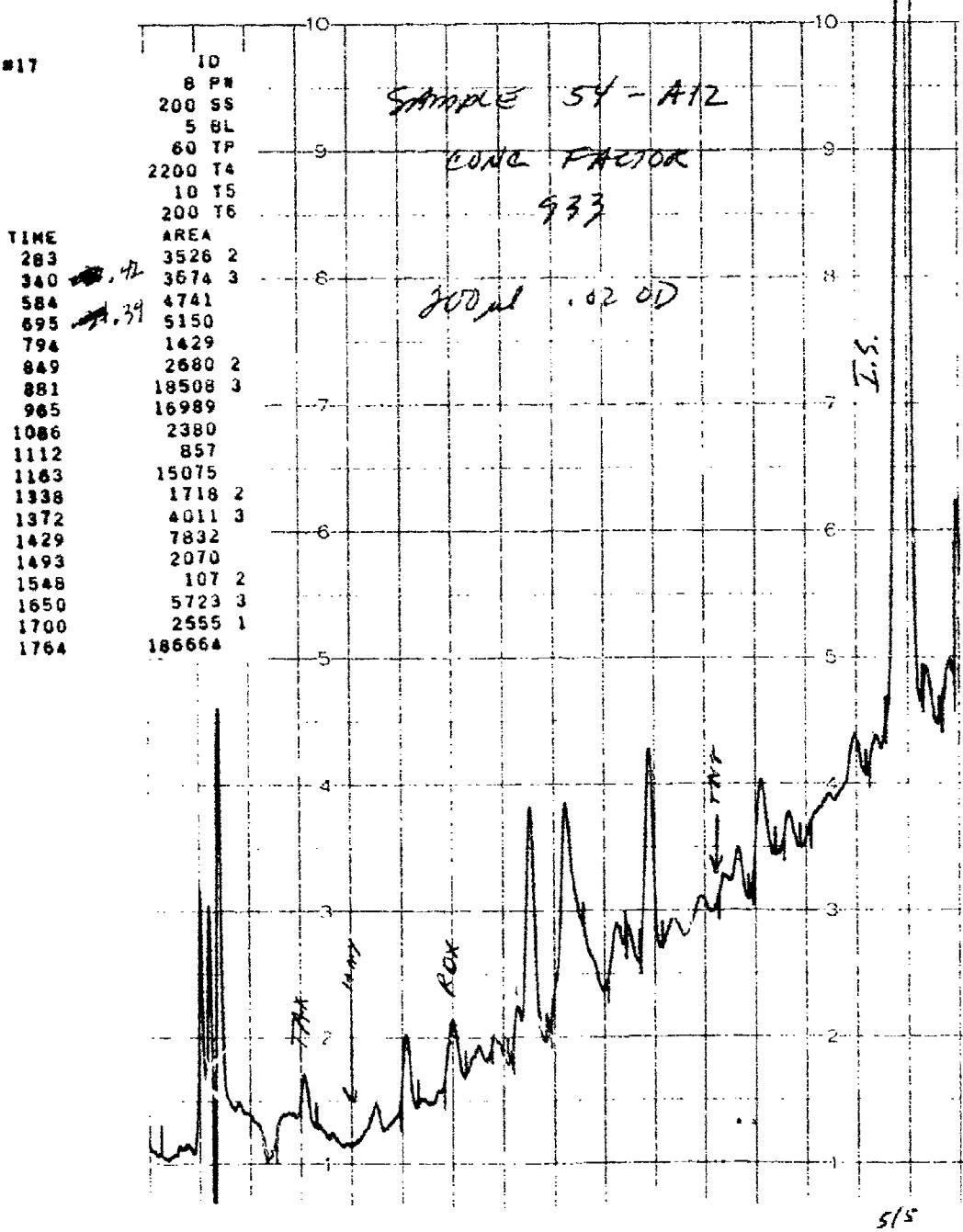
764 398 2
 823 3131 2
 857 17948 3
 942 14614
 1063 6937
 1144 13541
 1355 3340
 1407 5651
 1472 2101
 1585 2901
 1749 92768



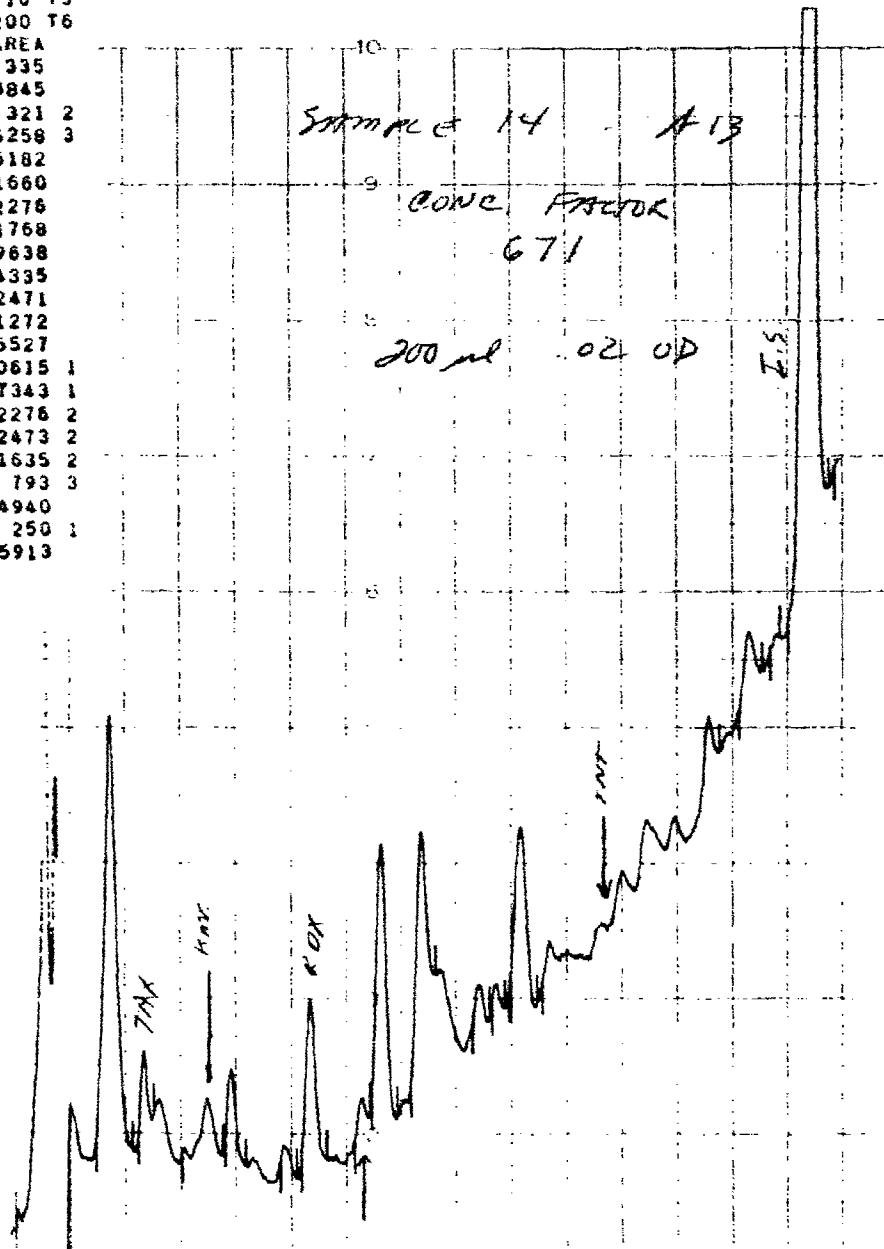
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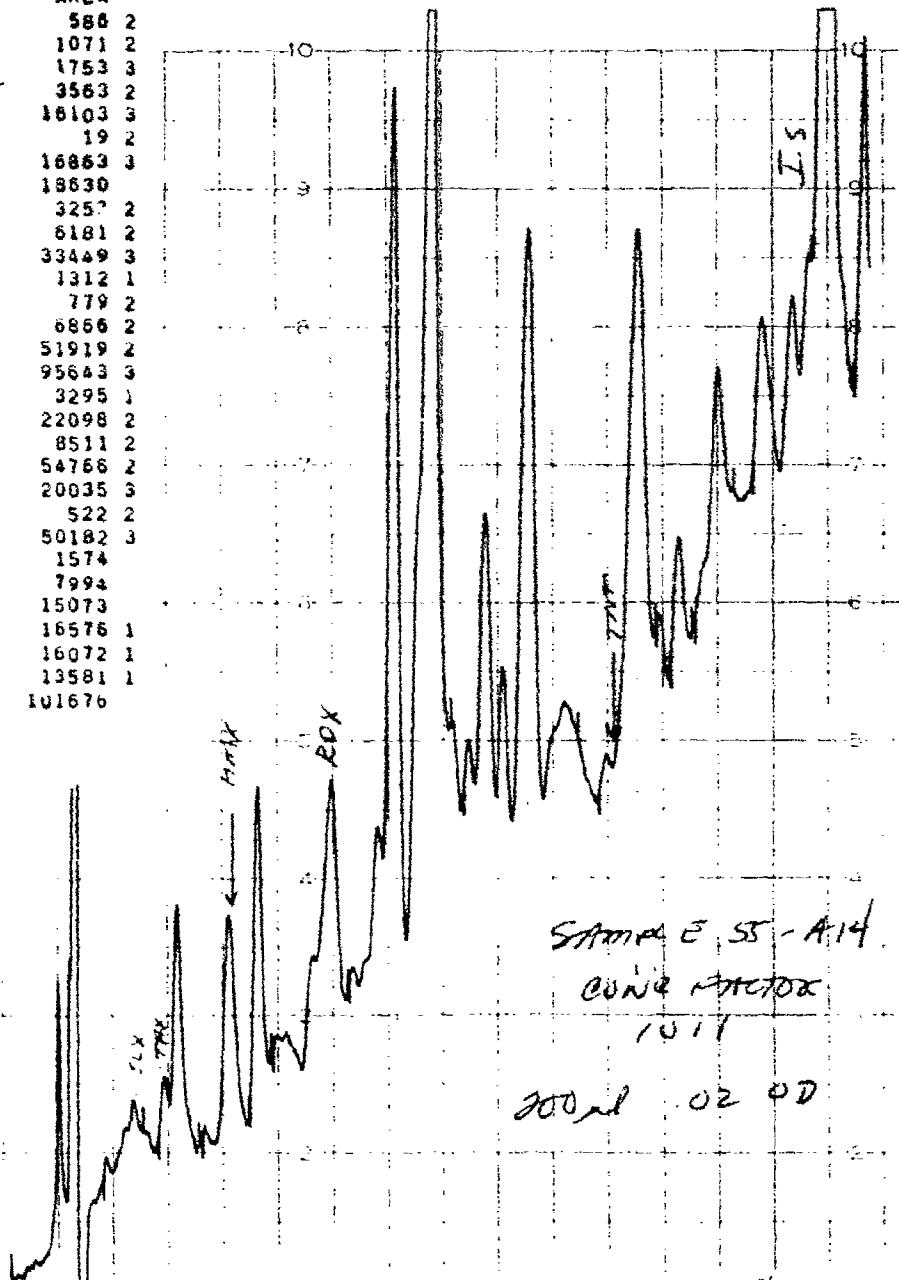
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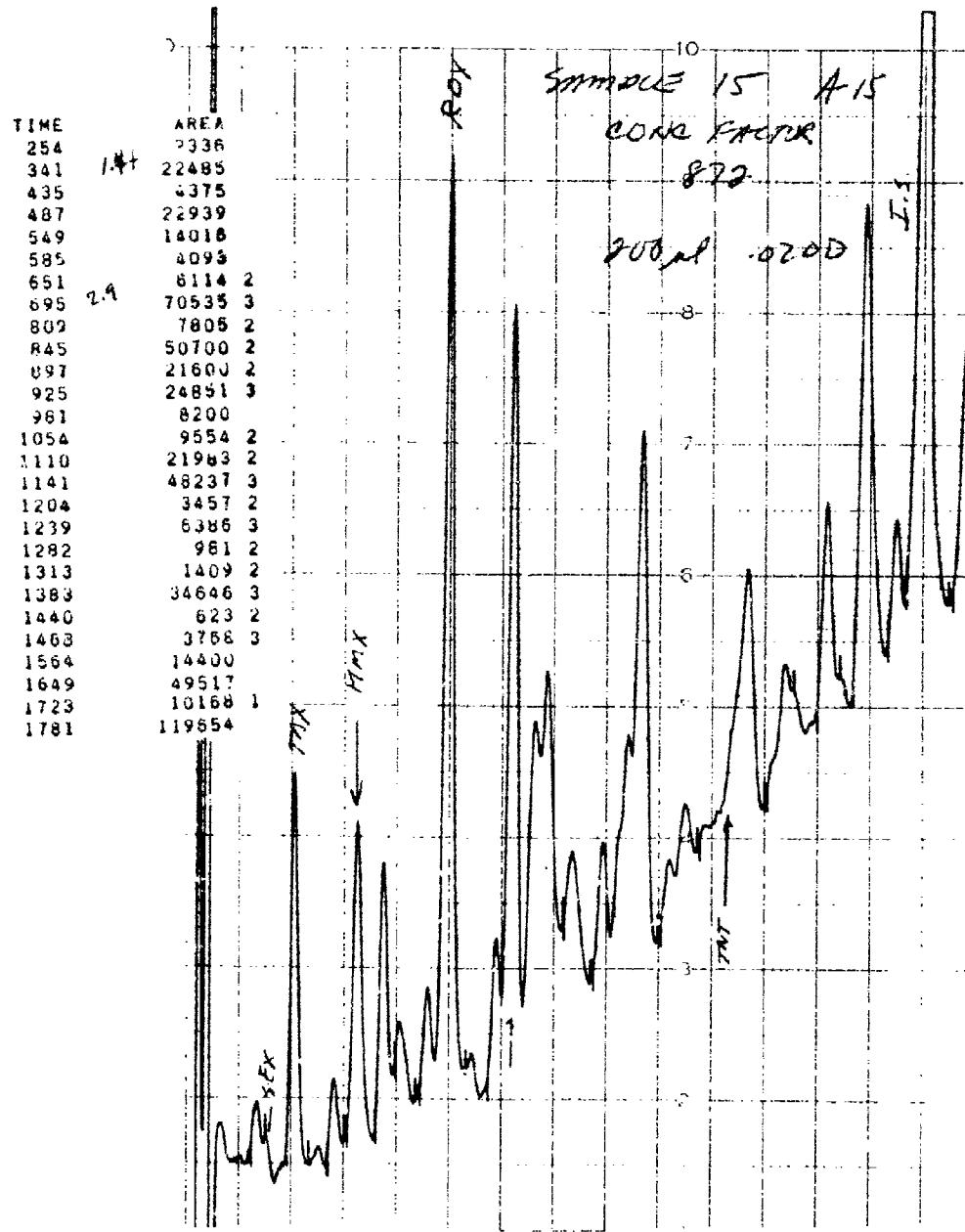


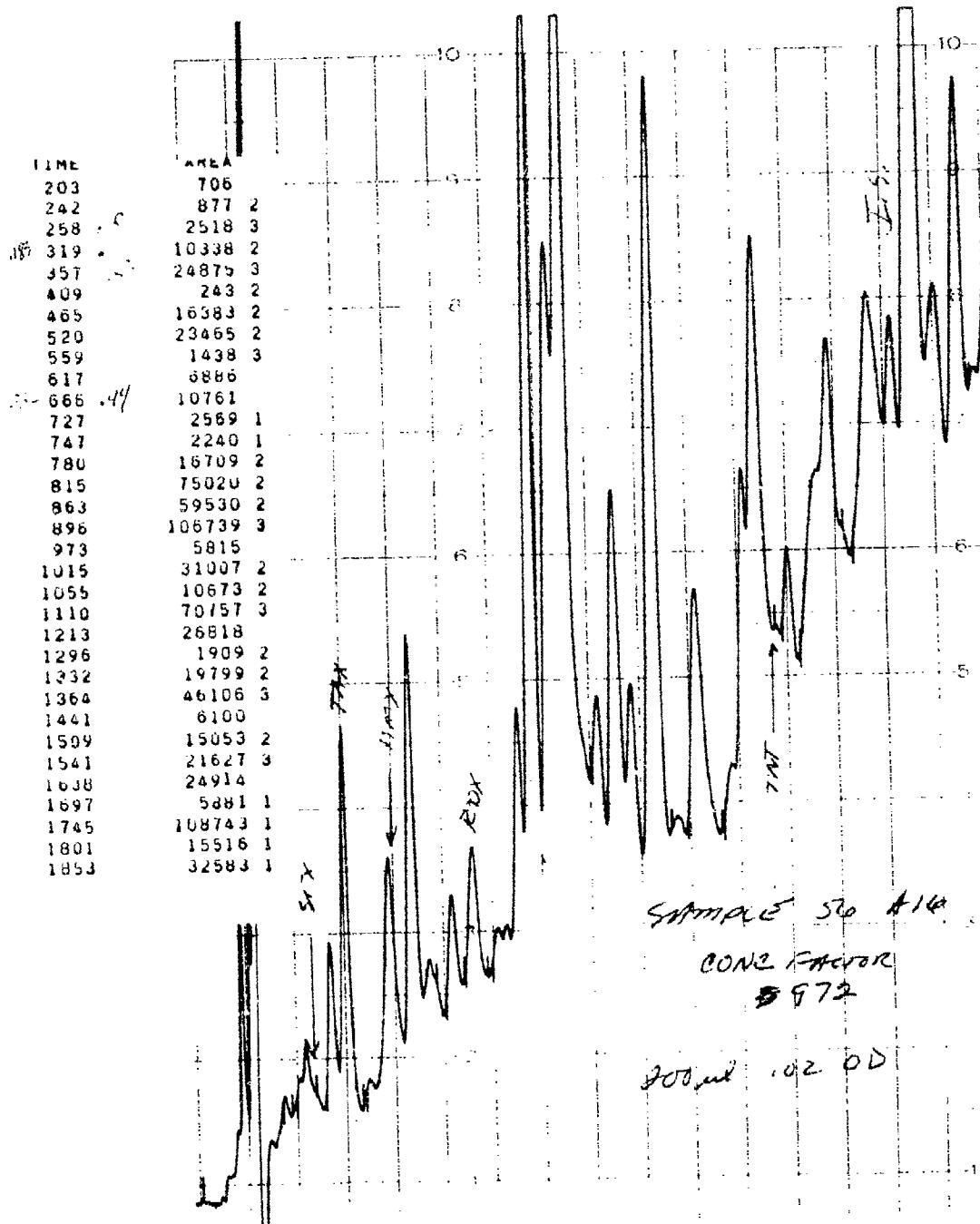
5 BL
 2200 T4
 10 T5
 200 T6
 TIME AREA
 257 41335
 333 33281/2 3845
 419 321 2
 473 5258 3
 525 5182
 640 1660
 697 7842 12276
 809 1768
 851 19638
 940 14335
 1065 2471
 1101 1272
 1157 15527
 1221 10615 1
 1327 7343 1
 1378 12276 2
 1434 12473 2
 1493 1635 2
 1573 793 3
 1659 4940
 1709 250 1
 1786 105913



TIME	AREA
212	586 2
252	1071 2
269	1753 3
338	3583 2
366	16103 3
426	19 2
479	16863 3
542	18630
581	3257 2
662	6181 2
702	33449 3
747	1312 1
776	779 2
805	6866 2
840	51919 2
923	95643 3
1005	3295 1
1041	22098 2
1081	8511 2
1138	54766 2
1190	20035 3
1307	522 2
1377	50182 3
1425	1574
1467	7994
1553	15073
1648	16576 1
1713	16072 1
1749	13581 1
1783	101676



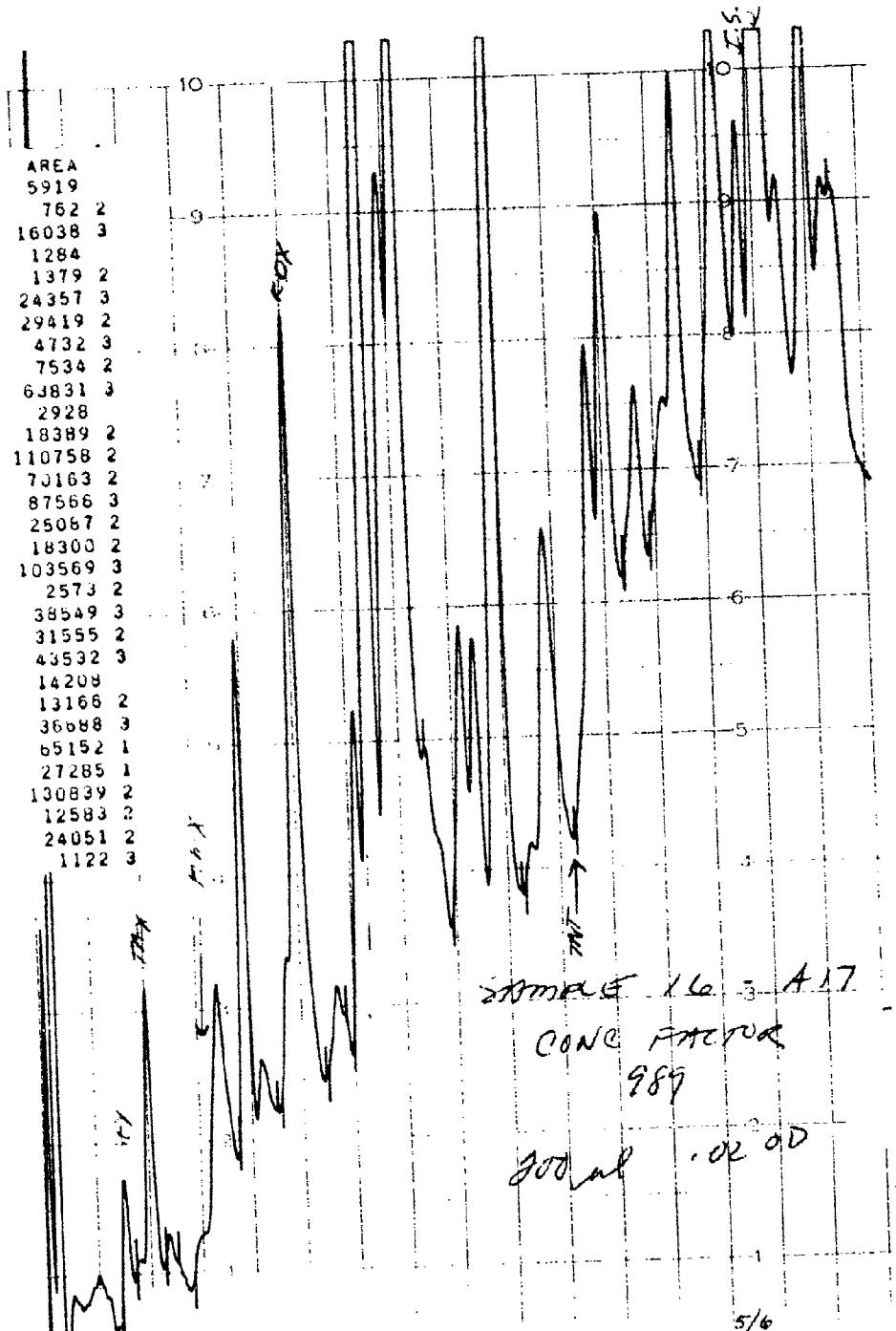


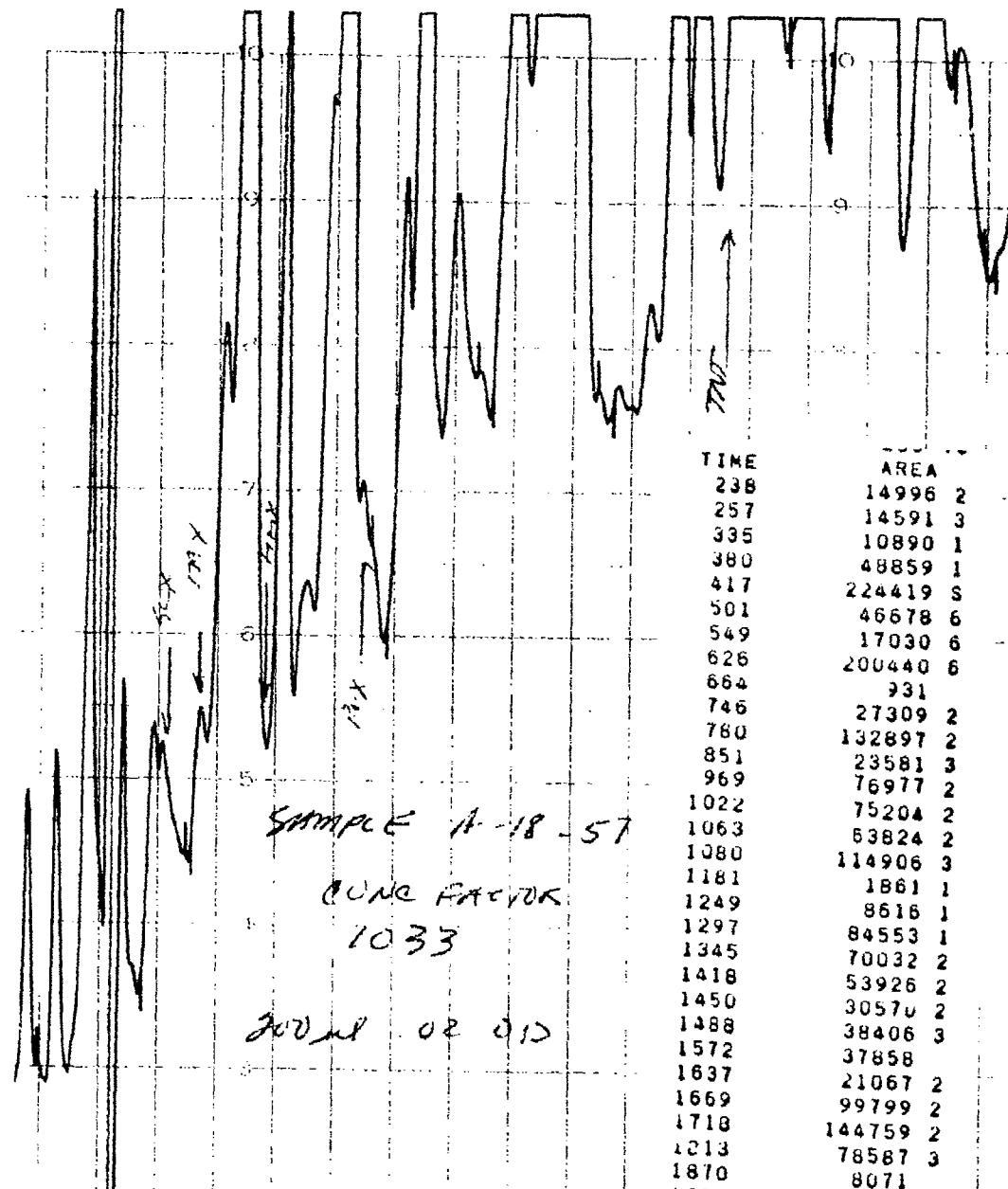


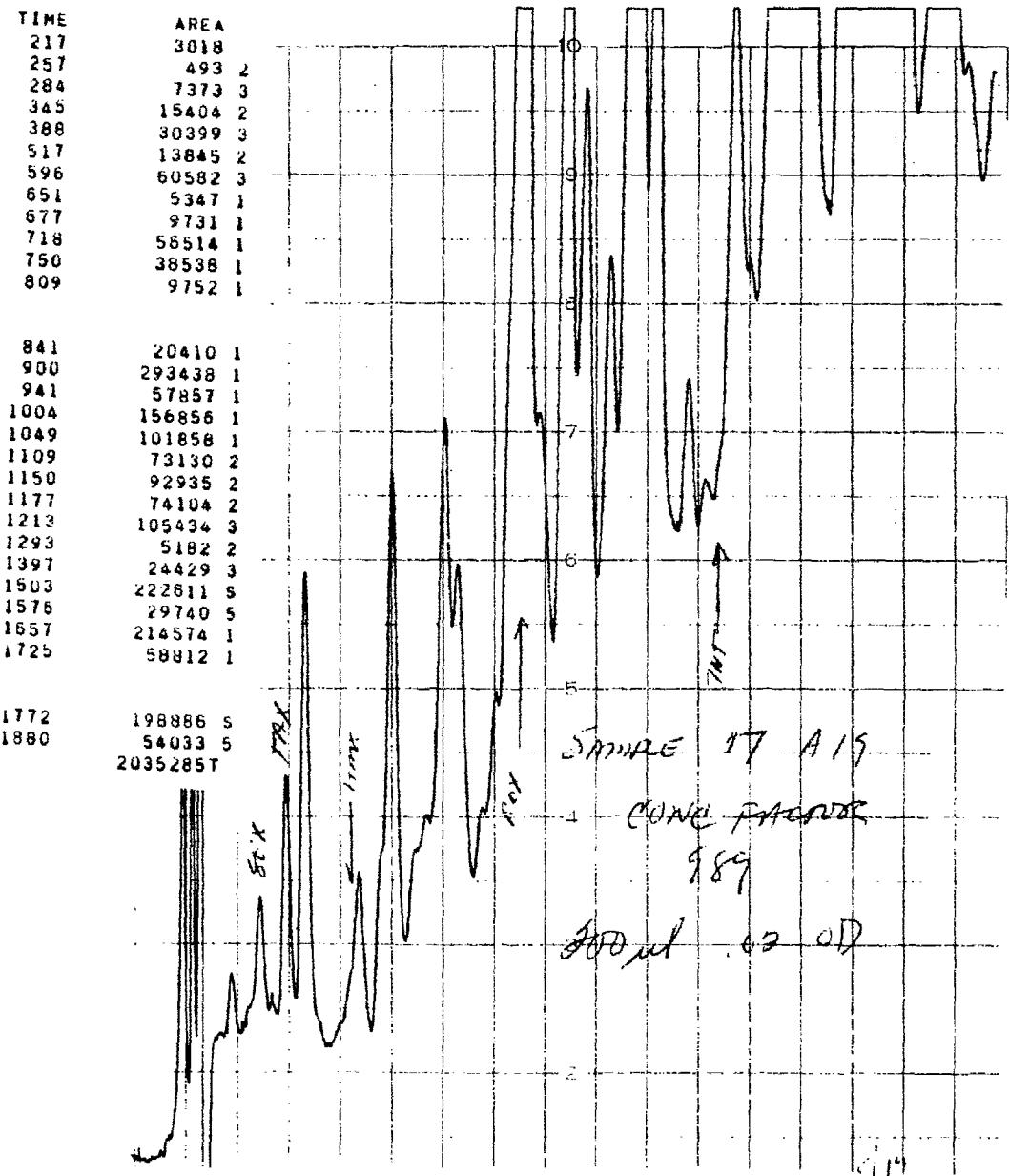
25

TIME
 285
 314
 345
 385
 459
 510
 573
 609
 674
 701
 786
 841
 875
 925
 958
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 1119
 1172
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 1505
 1569
 1605
 1690
 1750
 1793
 1834
 1900
 1941

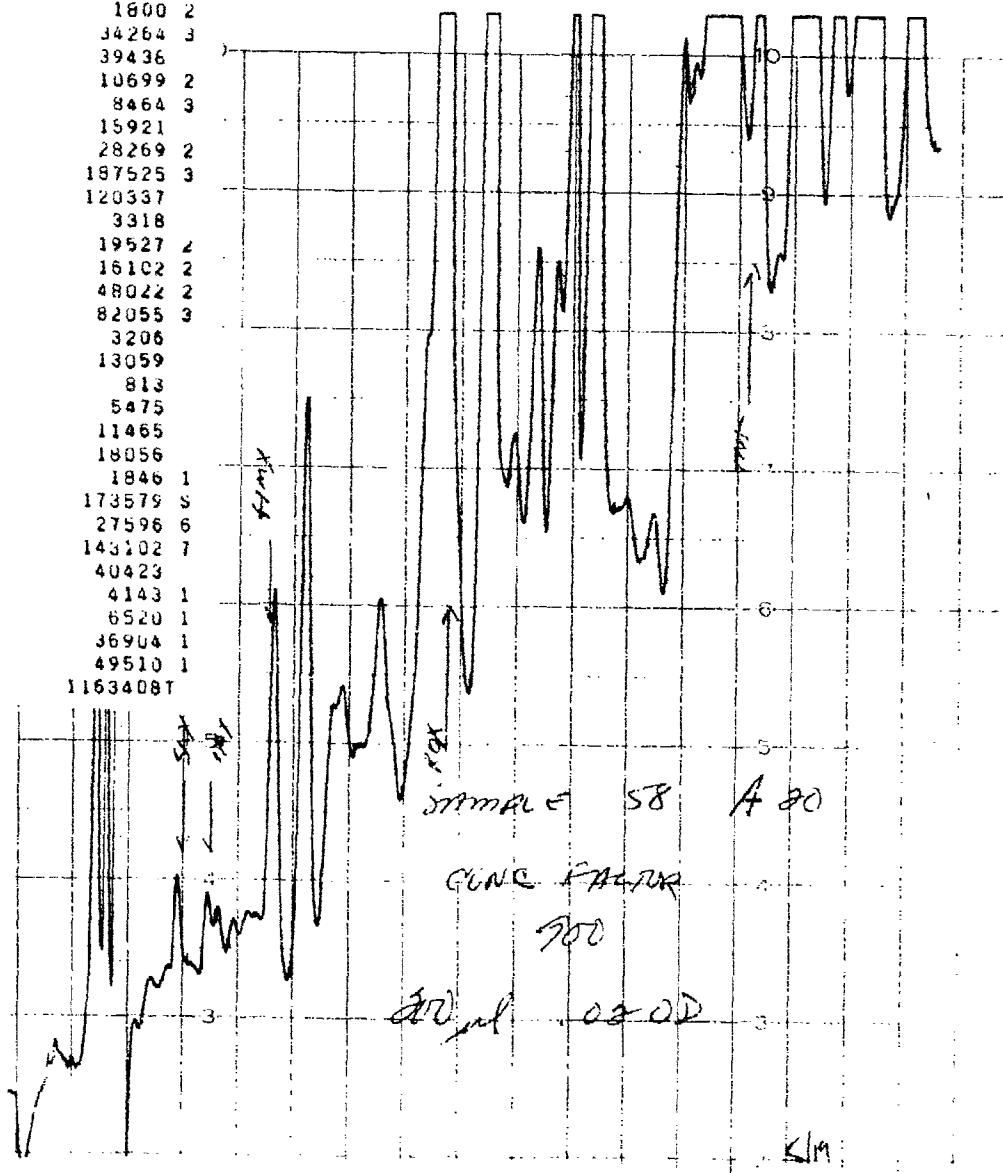
AREA
 5919
 762 2
 16038 3
 1284
 1379 2
 24357 3
 29419 2
 4732 3
 7534 2
 63831 3
 2928
 18389 2
 110758 2
 70163 2
 87566 3
 25087 2
 18300 2
 103569 3
 2573 2
 38549 3
 31555 2
 43532 3
 14208
 13166 2
 36688 3
 65152 1
 27285 1
 130839 2
 12583 2
 24051 2
 1122 3



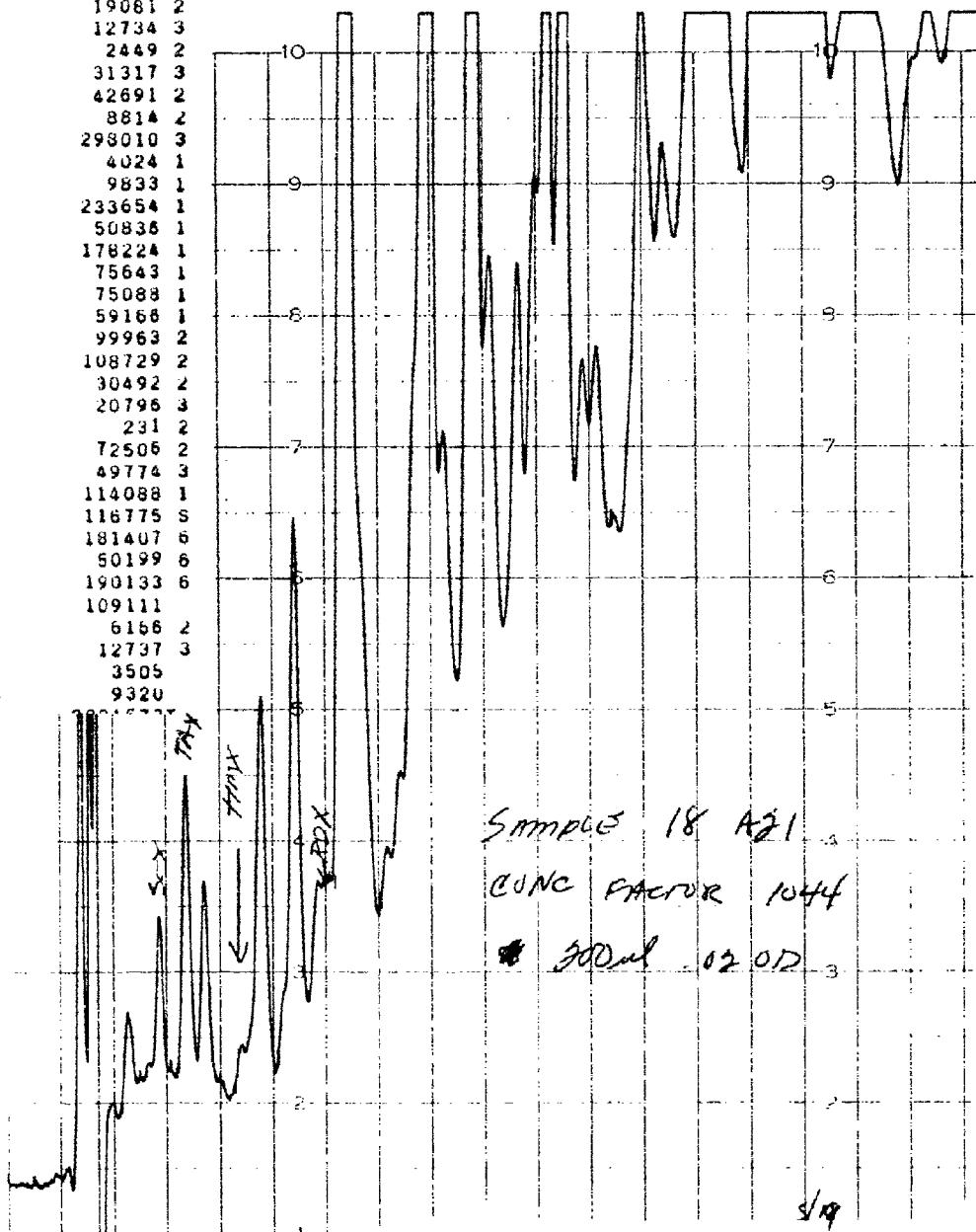




TIME	AREA
223	2588 2
285	6174 3
352	2338
373	870
407	1800 2
493	34264 3
562	39436
624	10699 2
642	8464 3
725	15921
825	28269 2
853	187525 3
953	120337
1014	3318
1063	19527 2
1106	16102 2
1137	48022 2
1183	82055 3
1321	3206
1378	13059
1404	813
1440	5475
1476	11465
1543	18056
1589	1846 1
1633	173579 5
1716	27596 6
1781	143102 7
1881	40423
2008	4143 1
2051	6520 1
2110	36904 1
2168	49510 1
1163408T	

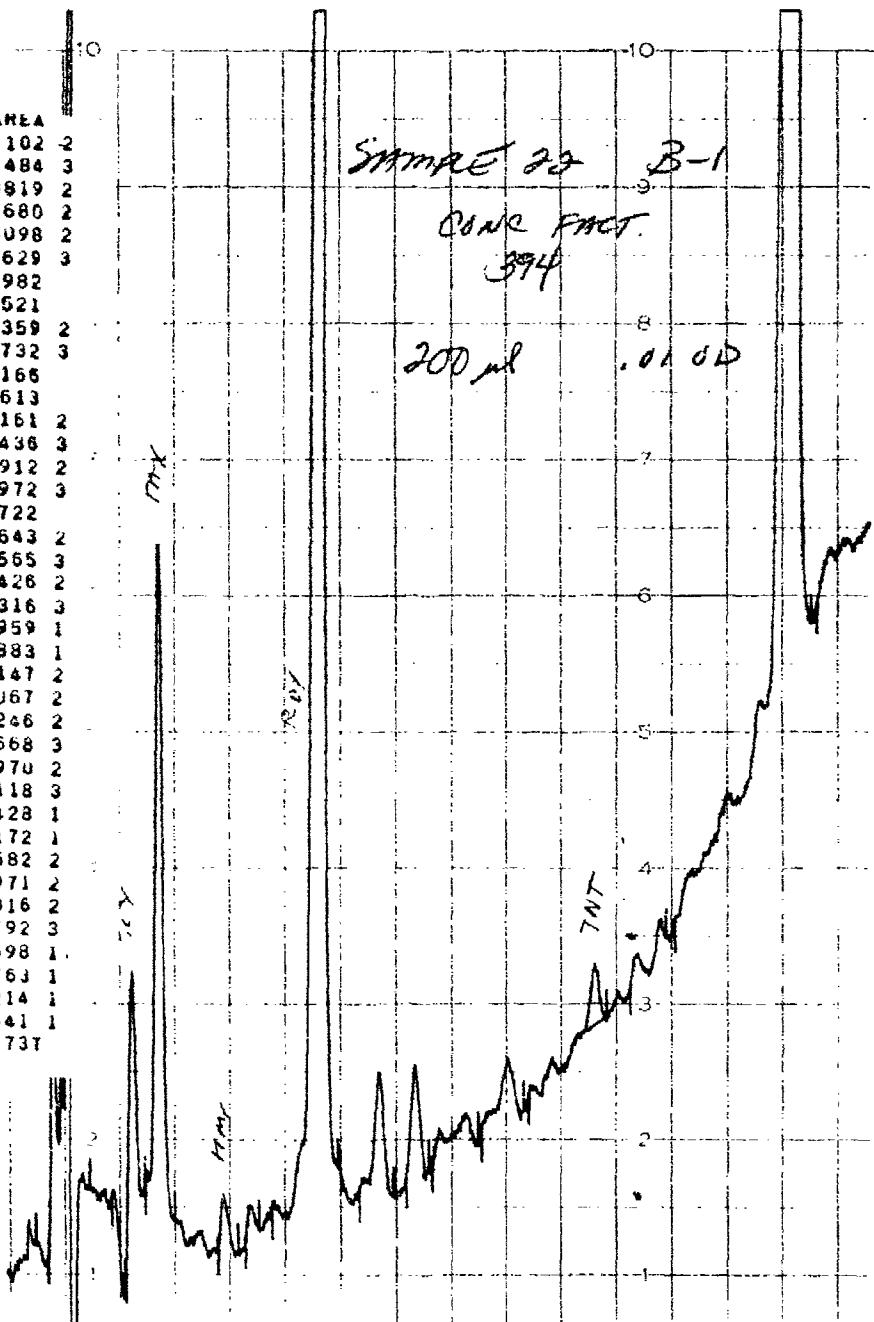


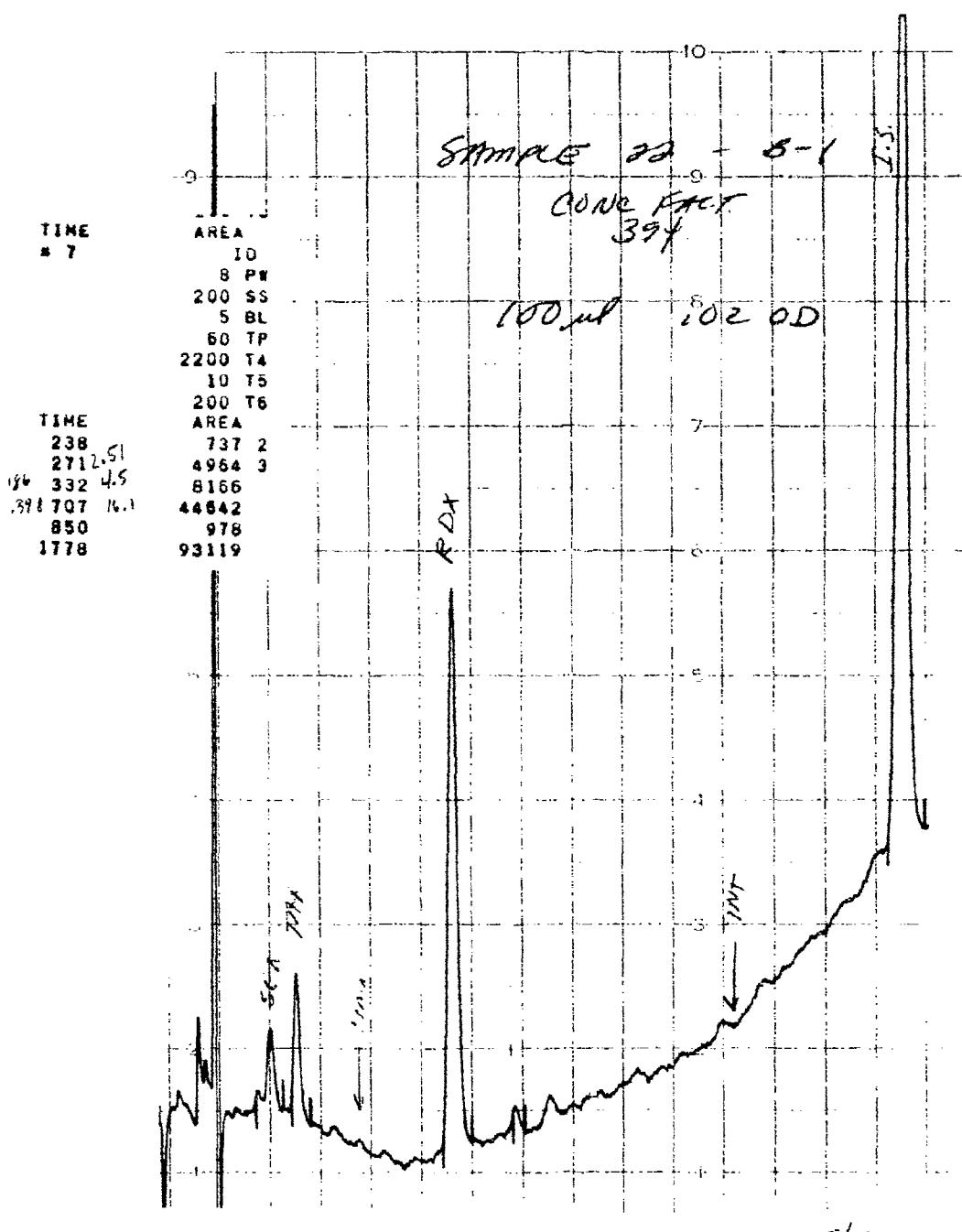
217	5171
262	495
290	8411
349	19081
393	12734
477	2449
524	31317
599	42691
652	8814
713	298010
809	4024
839	9833
897	233654
940	50836
1001	178224
1042	75643
1106	75088
1145	59168
1173	99963
1209	108729
1256	30492
1288	20795
1323	231
1389	72505
1437	49774
1524	114088
1570	116775
1653	181407
1717	50199
1761	190133
1869	109111
2005	6156
2037	12737
2101	3509
2144	9320



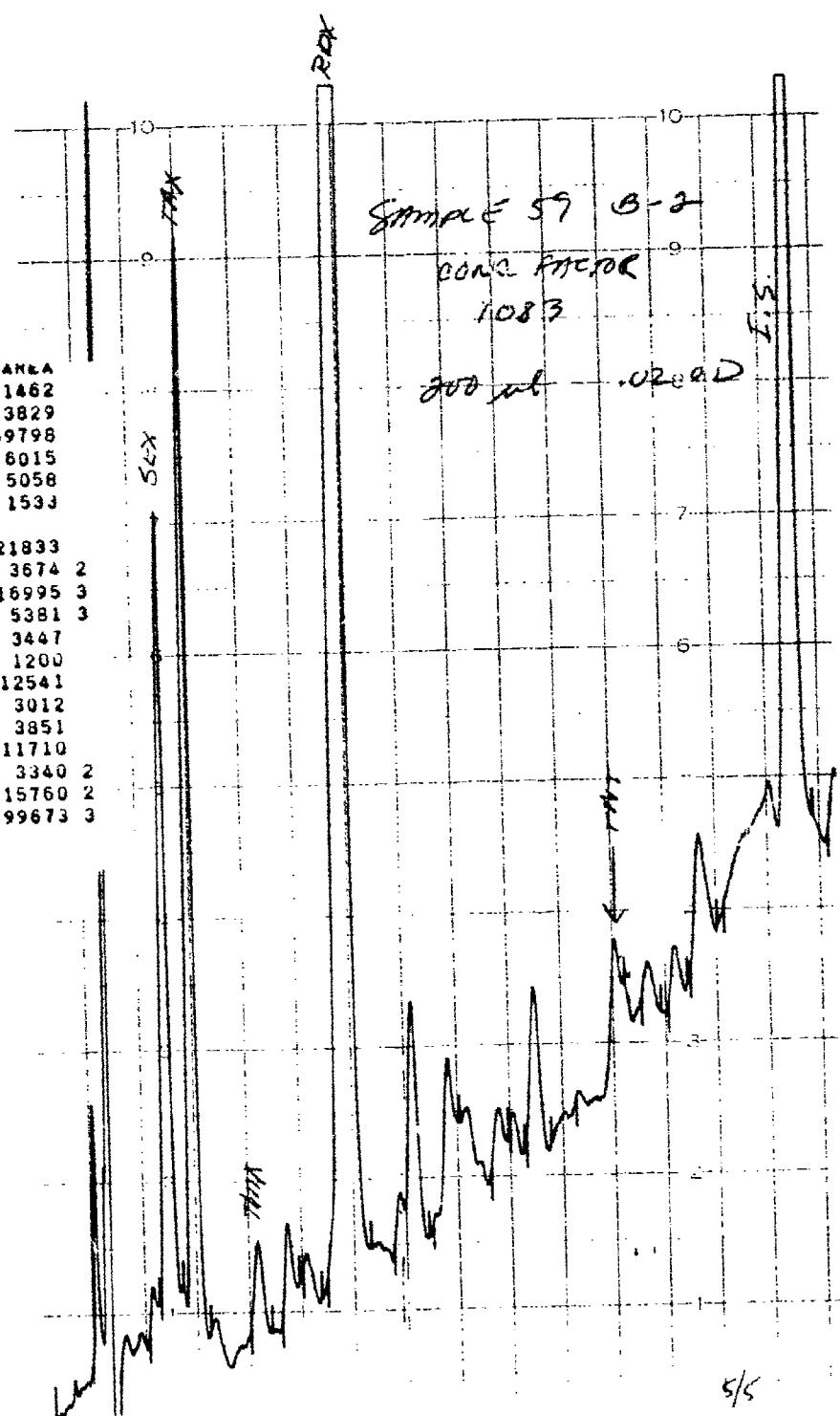
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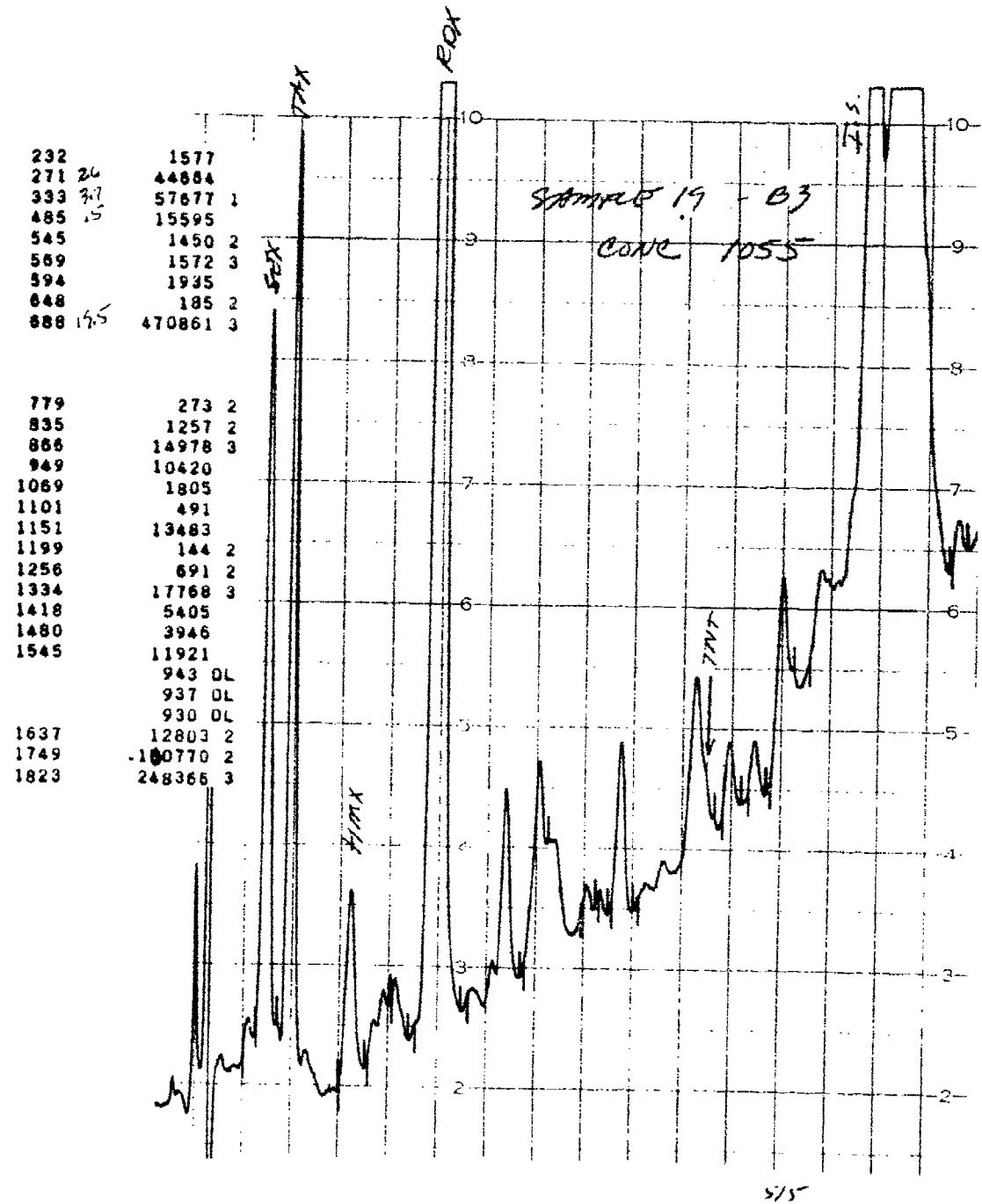
TIME	AREA
205	102 2
266	484 3
319	33819 2
338	26680 2
352	95098 2
381	106629 3
452	1982
496	1110 15521
527	359 2
553	40 36732 3
696	3165
753	1613
868	2161 2
898	191436 3
993	912 2
1035	7972 3
1113	7722
1165	2643 2
1220	4565 3
1262	426 2
1317	7316 3
1366	959 1
1397	883 1
1414	2147 2
1453	1067 2
1461	1246 2
1507	5668 3
1597	970 2
1854	118 3
1687	428 1
1709	5172 1
1789	8582 2
1799	2971 2
1870	5016 2
1929	385792 3
2015	5598 1
2096	14763 1
2118	6214 1
2140	10541 1
	10054737



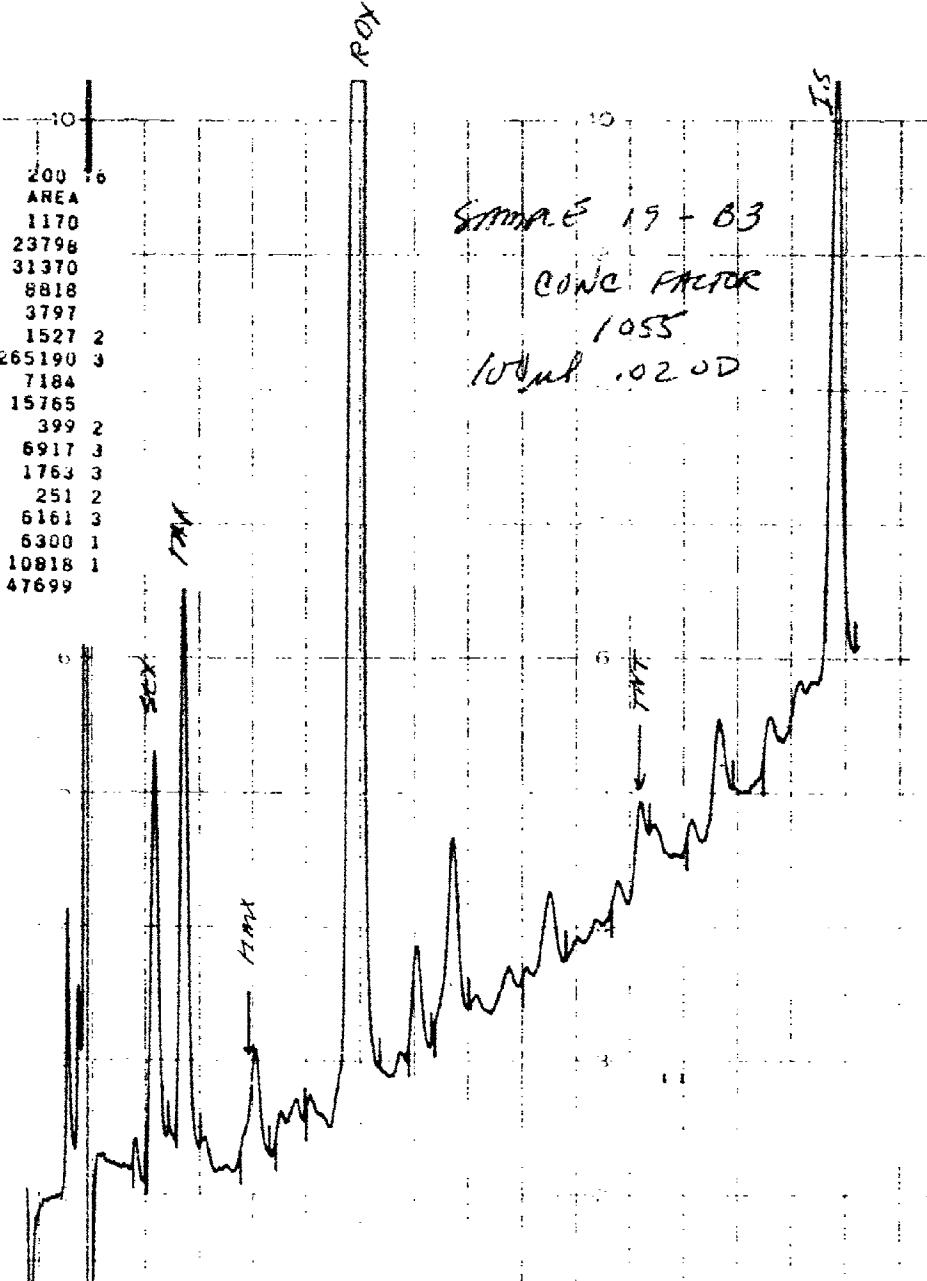


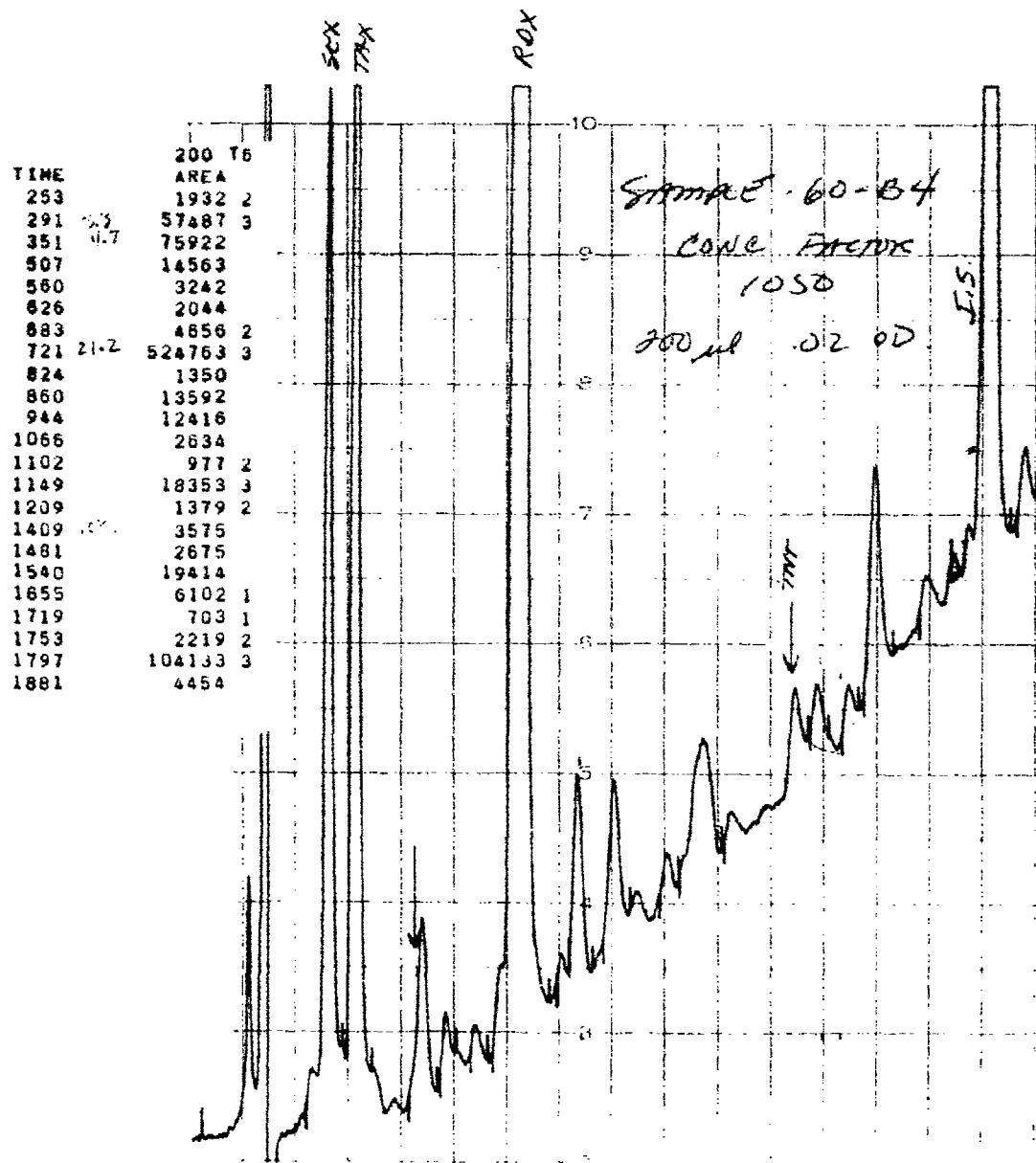
TIME	AREA
230	25
269	1462
328	43829
475	59798
544	6015
585	5058
	1533
676	421833
803	3674 2
834	16995 3
917	5381 3
1032	3447
1063	1200
1117	12541
1378	3012
1442	3851
1501	11710
1591	3340 2
1666	15760 2
1720	99673 3





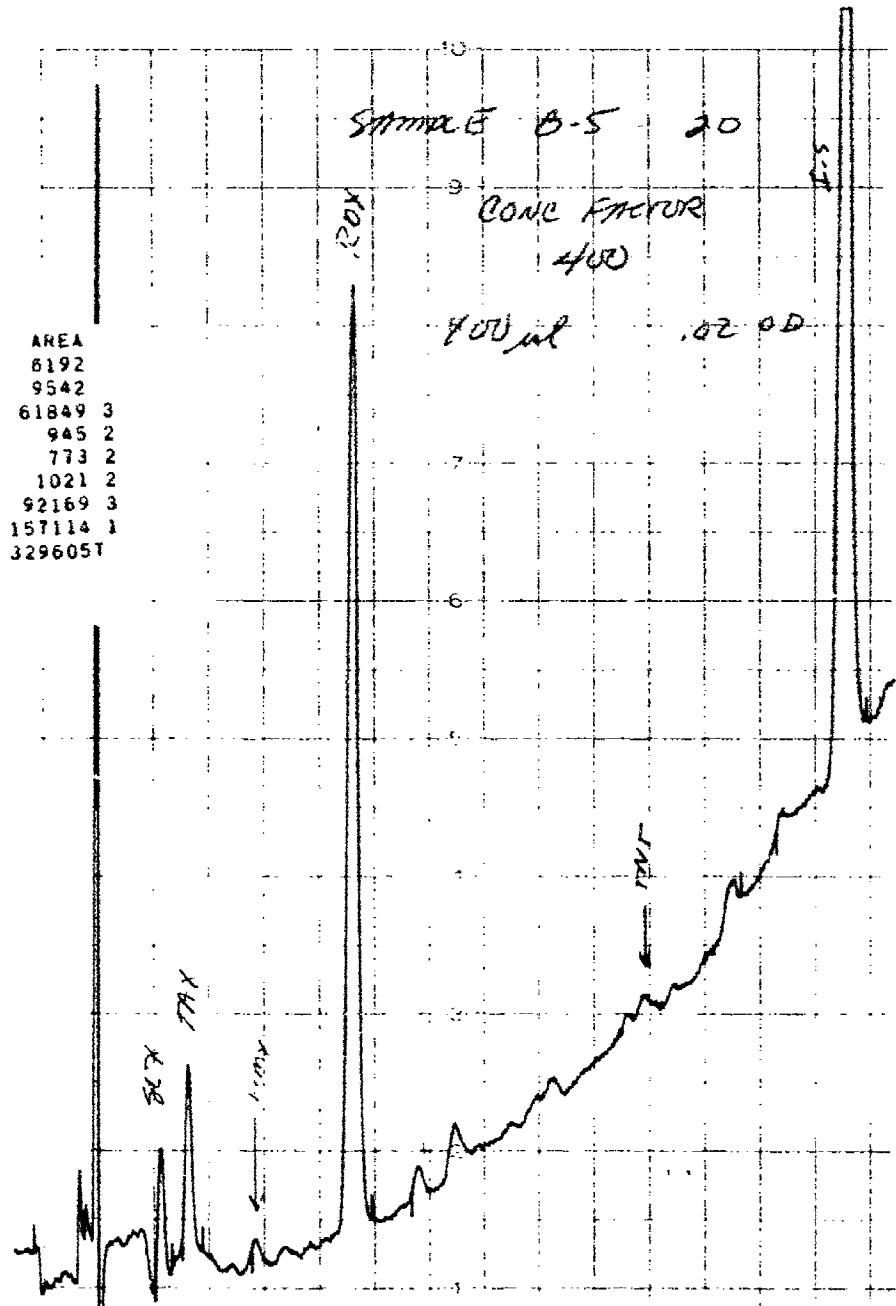
TIME	AREA
261	1170
304	23798
369	31370
533	8818
589	3797
654	1527 2
755	265190 3
894	7184
977	15765
1134	399 2
1193	6917 3
1397	1763 3
1509	251 2
1572	6161 3
1685	6300 1
1753	10818 1
1833	47699

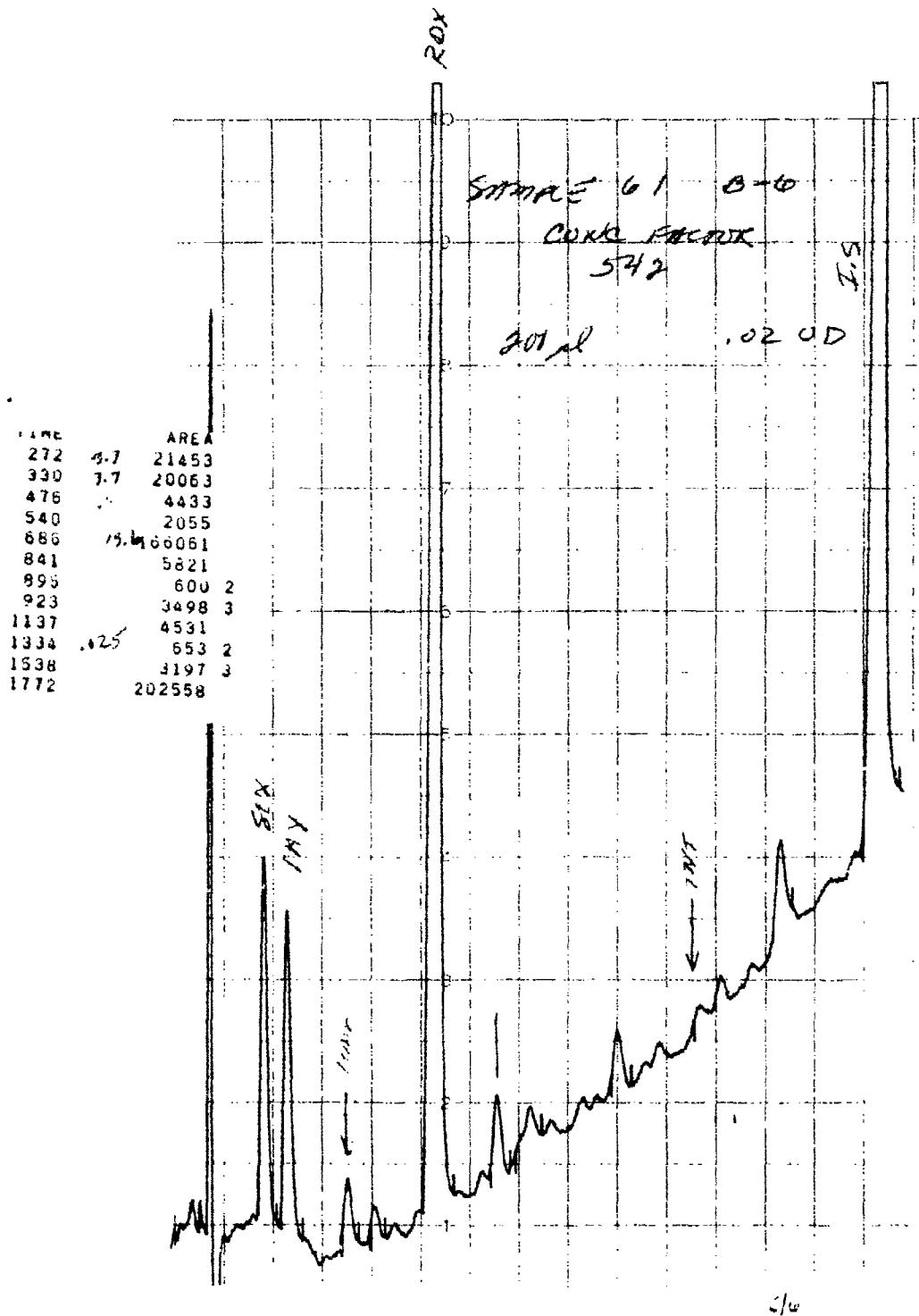




5/4

TIME	AREA
285	5.2
344	5.2
702	61849 3
844	945 2
926	773 2
1638	1021 2
1777 21.7	92169 3
2193	157114 1
	3296051

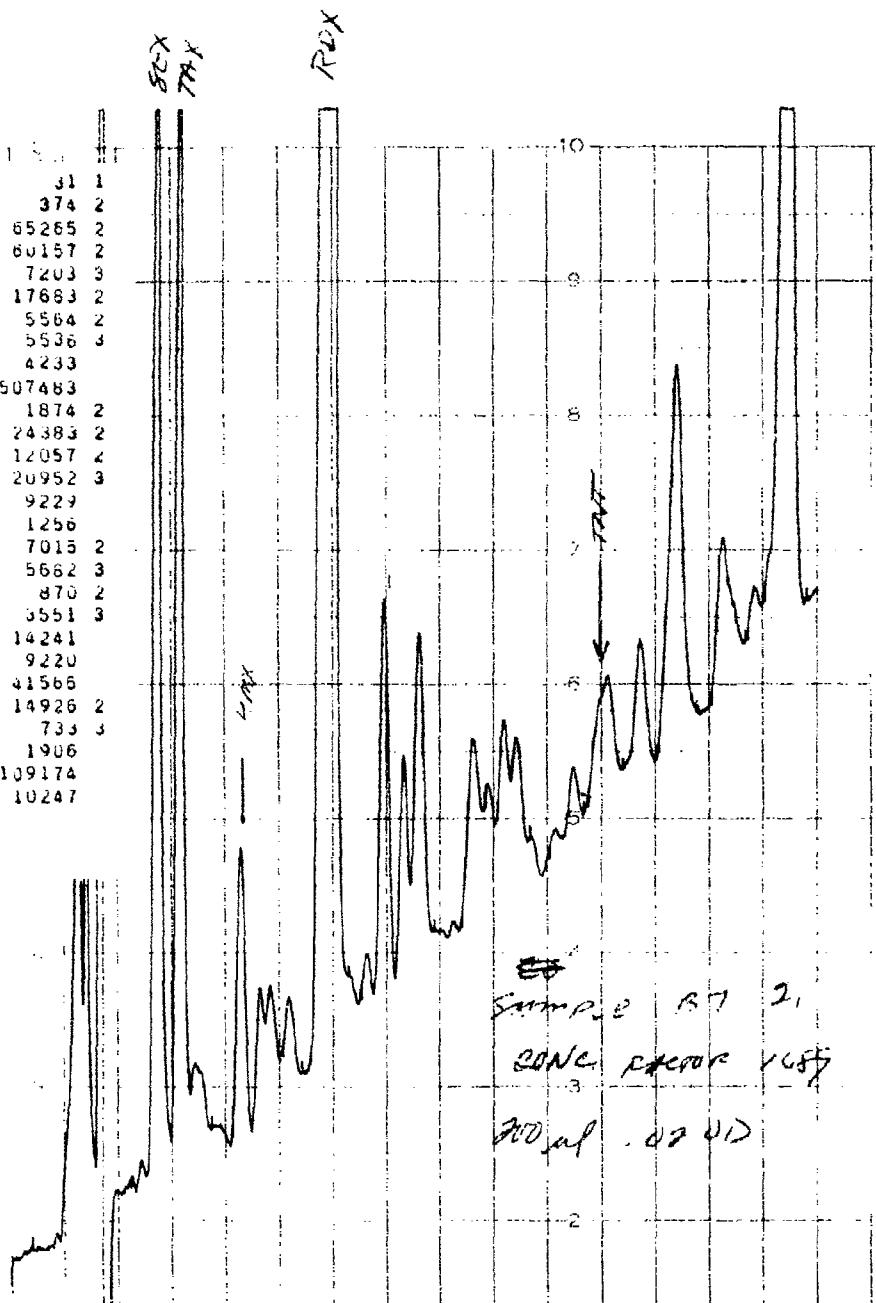




224
 247
 242
 333
 367
 471
 516
 538
 579
 661 18.1
 755
 793
 838
 872
 991
 1024
 1062
 1089
 1173
 1216
 1293
 1360
 1448
 1553
 1582
 1623
 1693
 1798

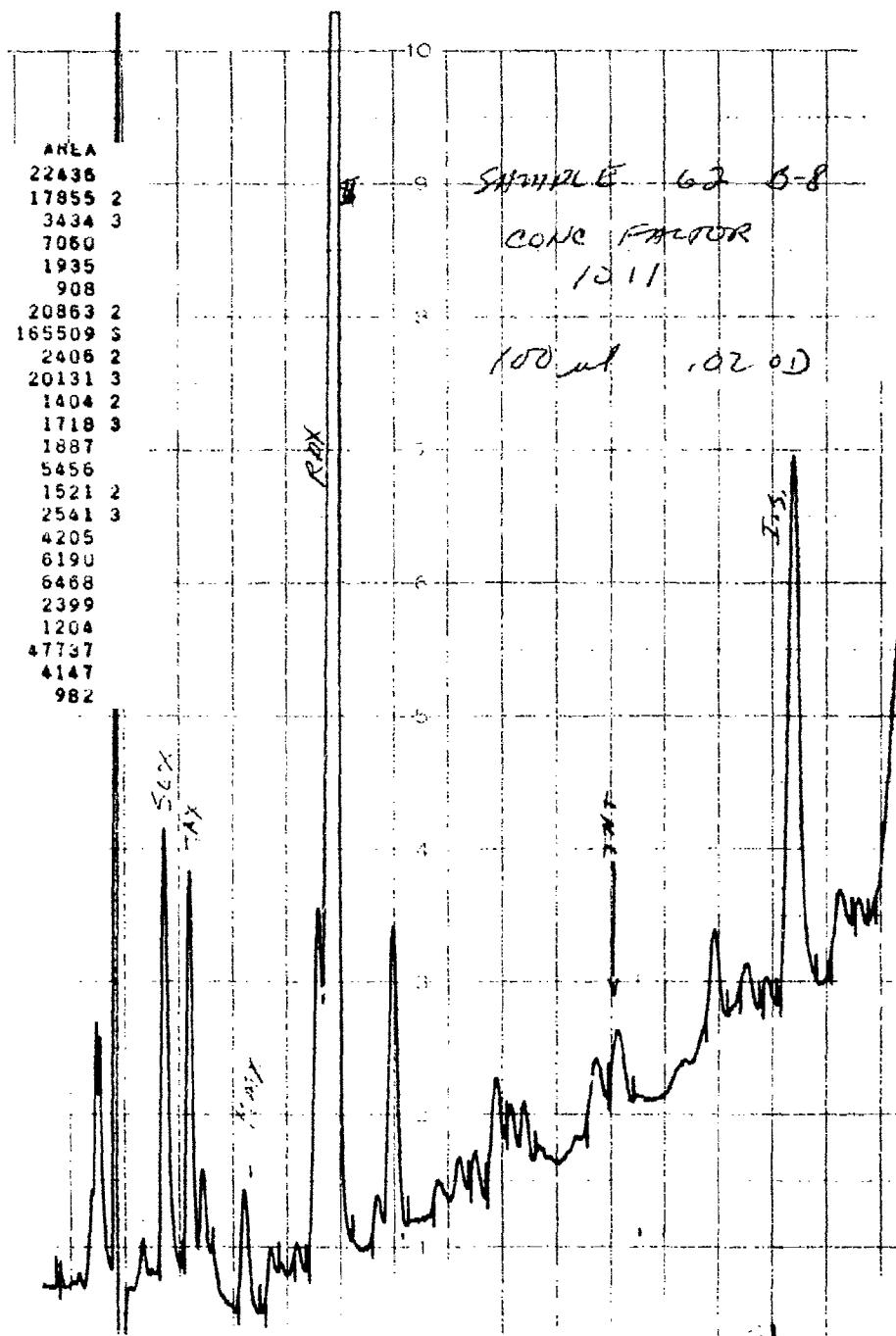
3,27
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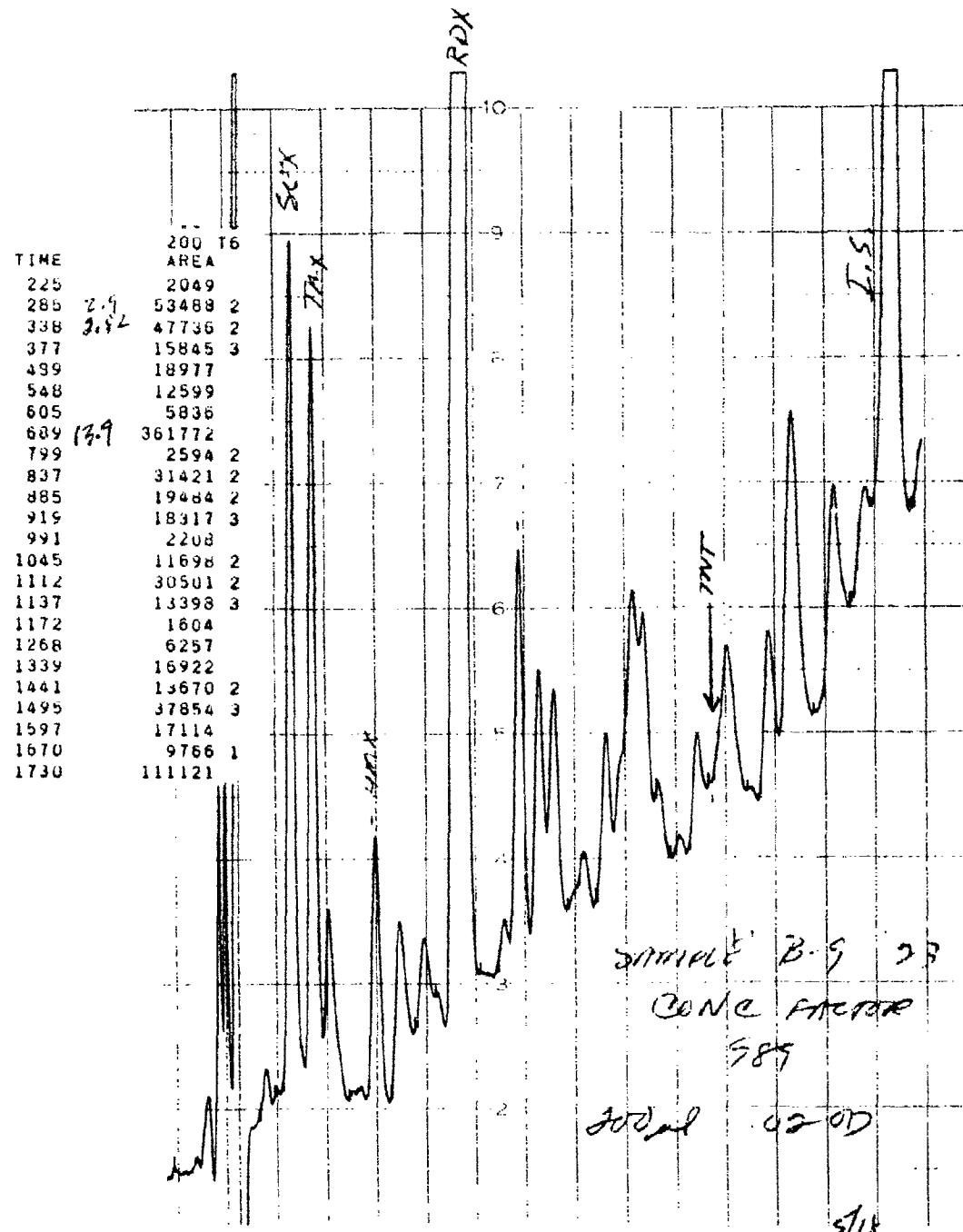
31 1
 374 2
 65265 2
 60157 2
 7203 3
 17683 2
 5564 2
 5536 3
 4233
 507483
 1874 2
 24383 2
 12057 2
 20952 3
 9229
 1256
 7015 2
 5662 3
 870 2
 3551 3
 14241
 9220
 41566
 14926 2
 733 3
 1906
 109174
 10247

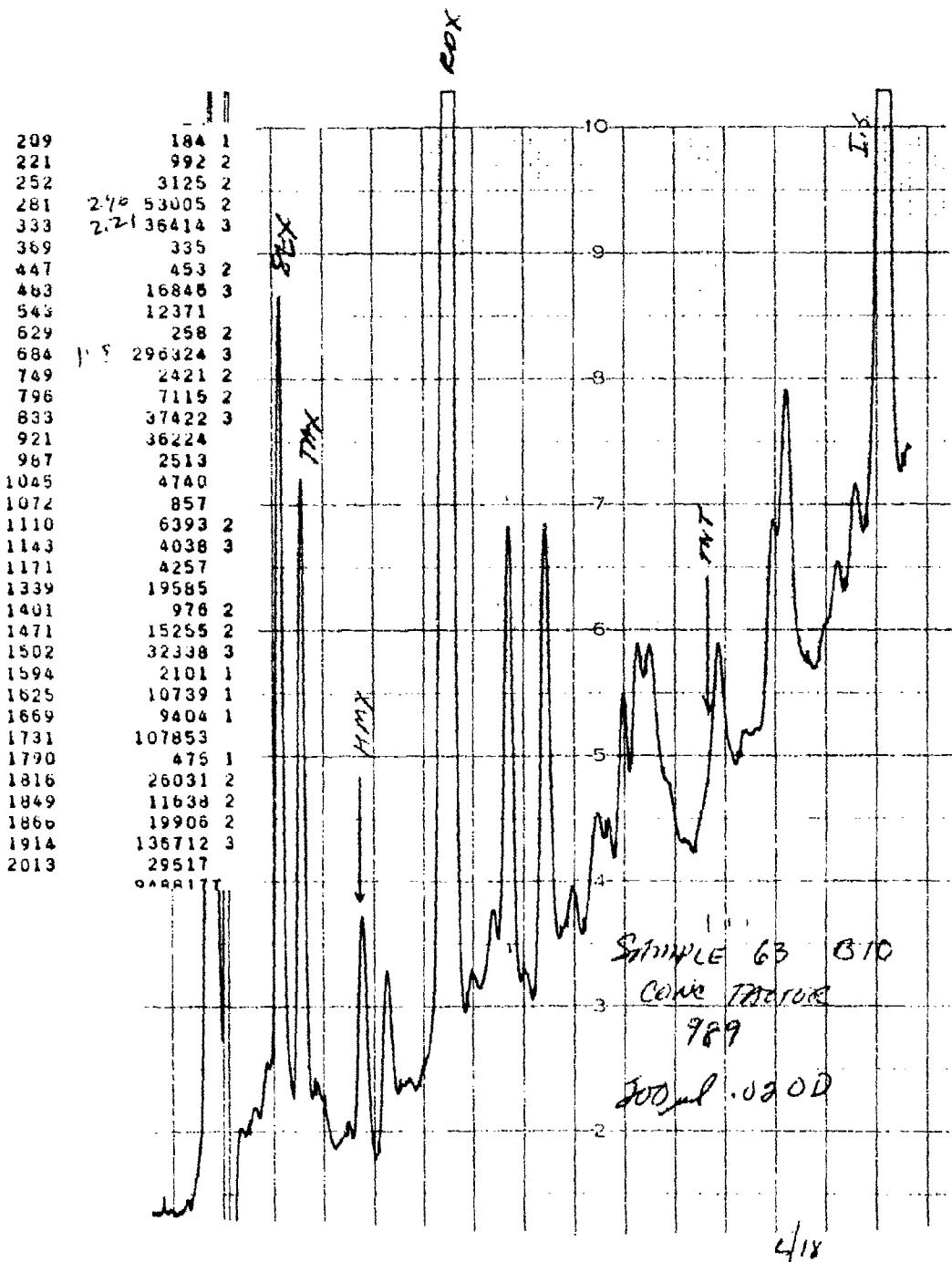


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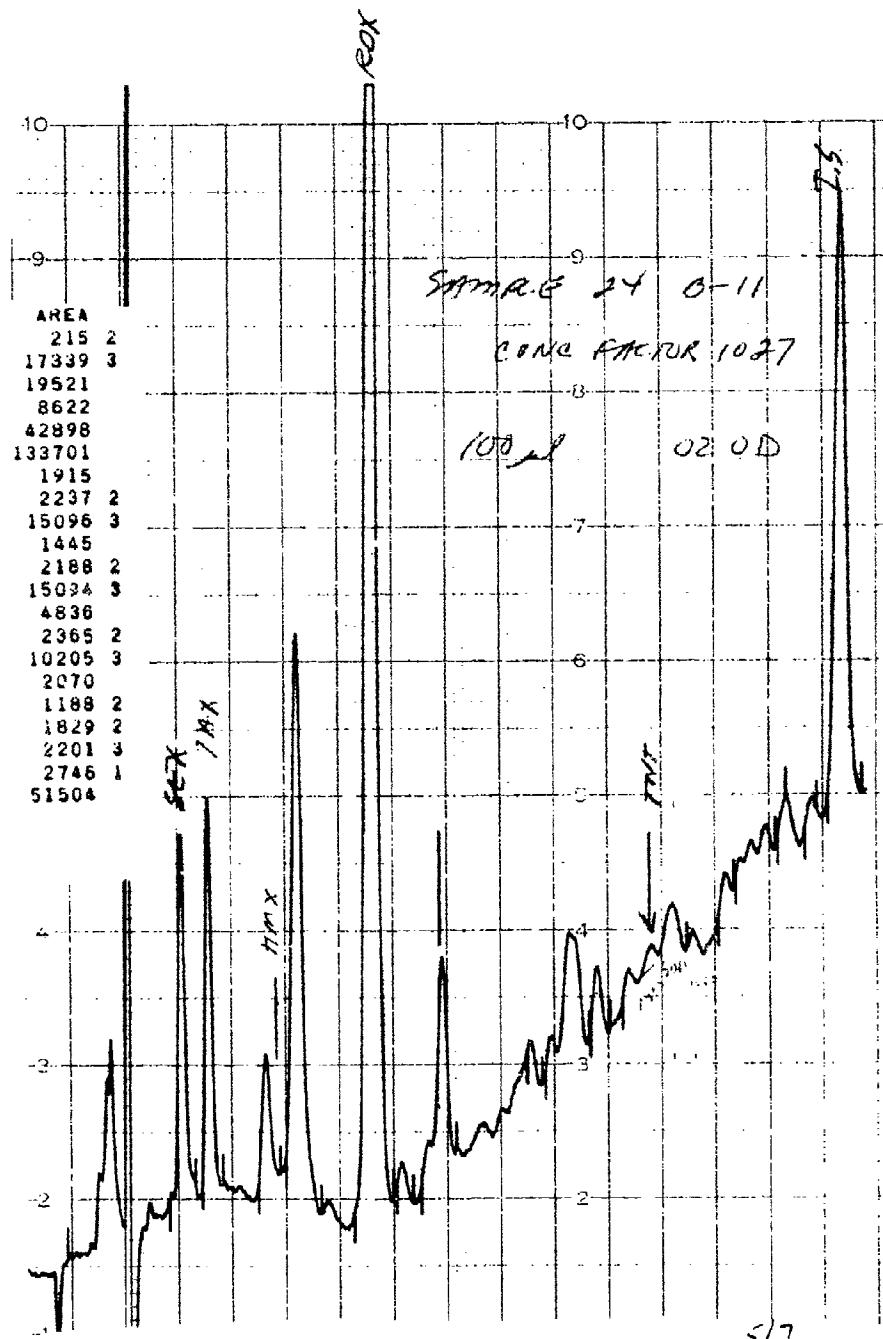
TIME	AREA
242	22436
298	17855 2
329	3434 3
422	7060
480	1935
538	908
586	20863 2
615	165509 5
718	2406 2
755	20131 3
856	1404 2
902	1718 3
938	1887
986	5456
1017	1521 2
1047	2541 3
1206	4205
1253	6190
1467	6468
1537	2399
1581	1204
1642	47737
1746	4147
1788	982

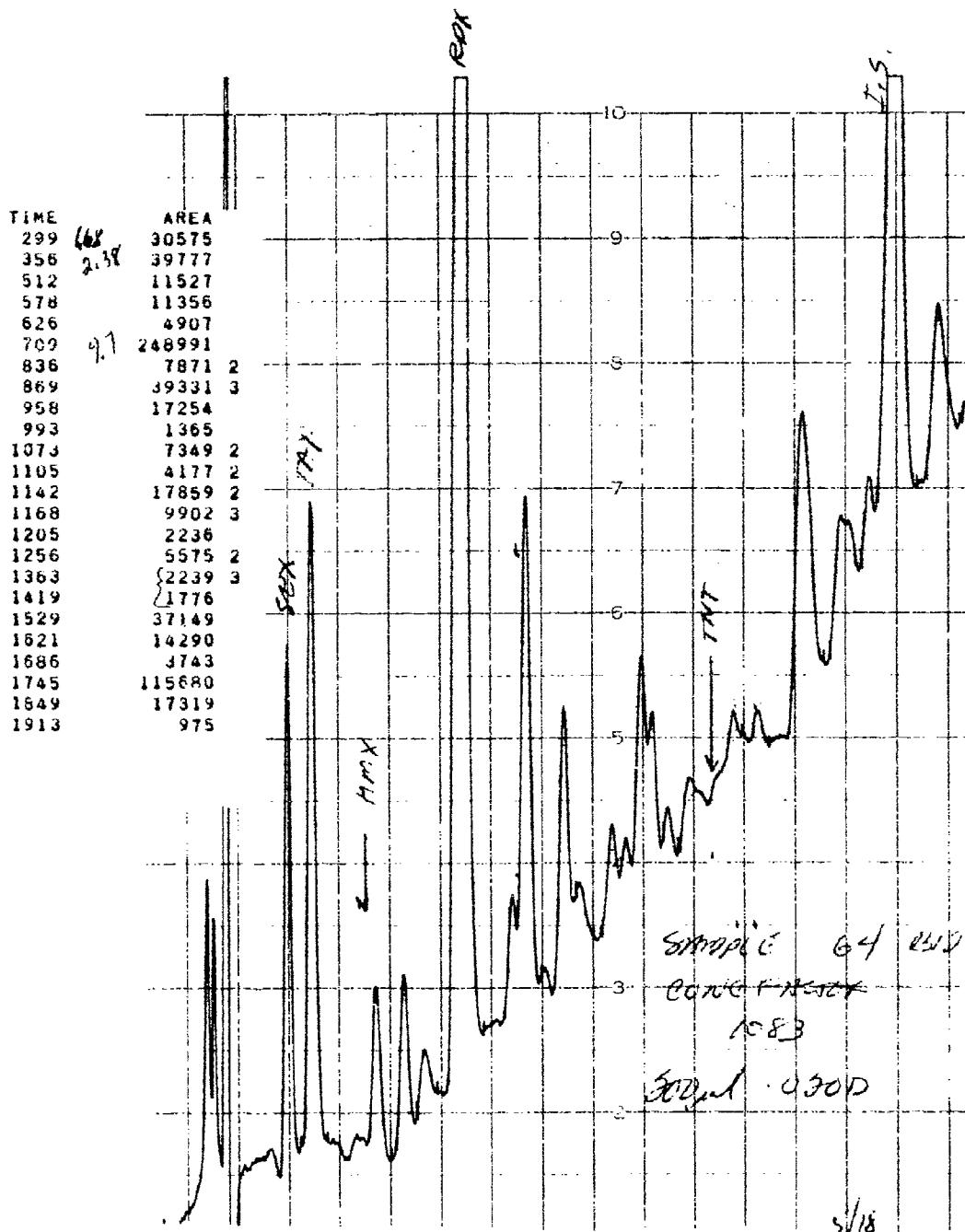


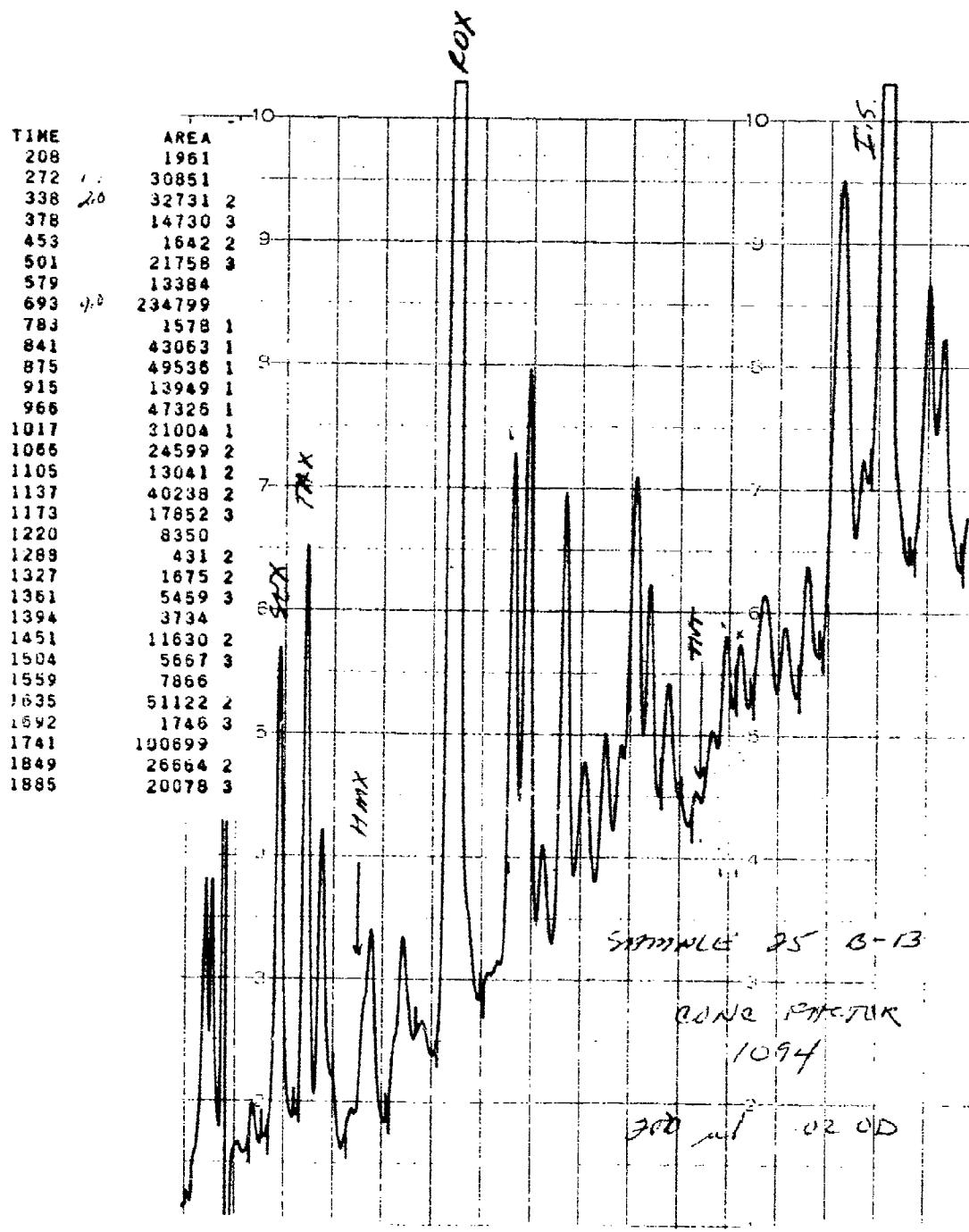




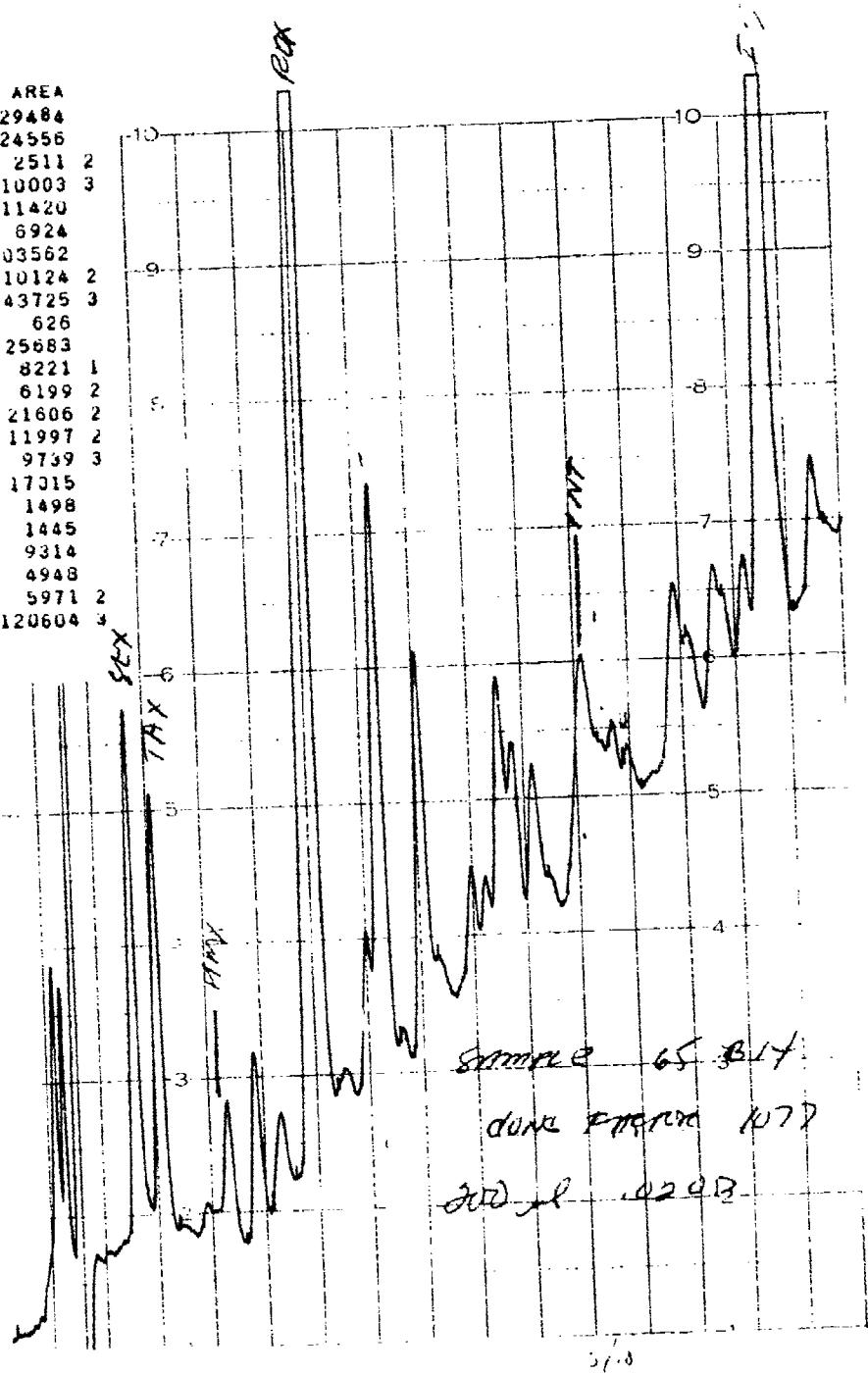
TIME	AREA
234	215 2
257	17339 3
317	19521
446	8622
516	42898
682	133701
750	1915
812	2237 2
842	15096 3
1040	1445
1088	2188 2
1130	15034 3
1193	4836
1261	2365 2
1356	10205 3
1480	2070
1512	1188 2
1538	1829 2
1568	2201 3
1669	2746 1
1738	51504



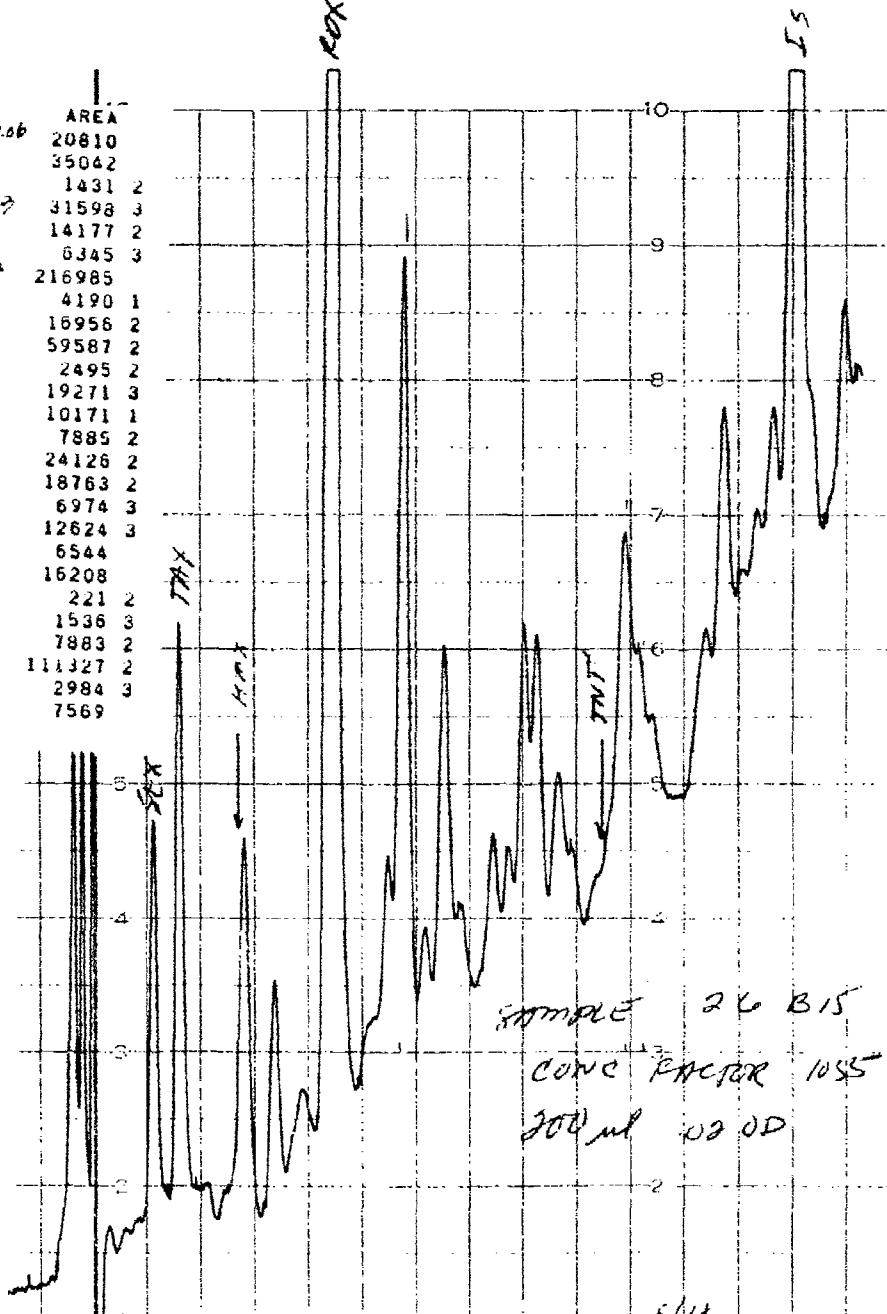


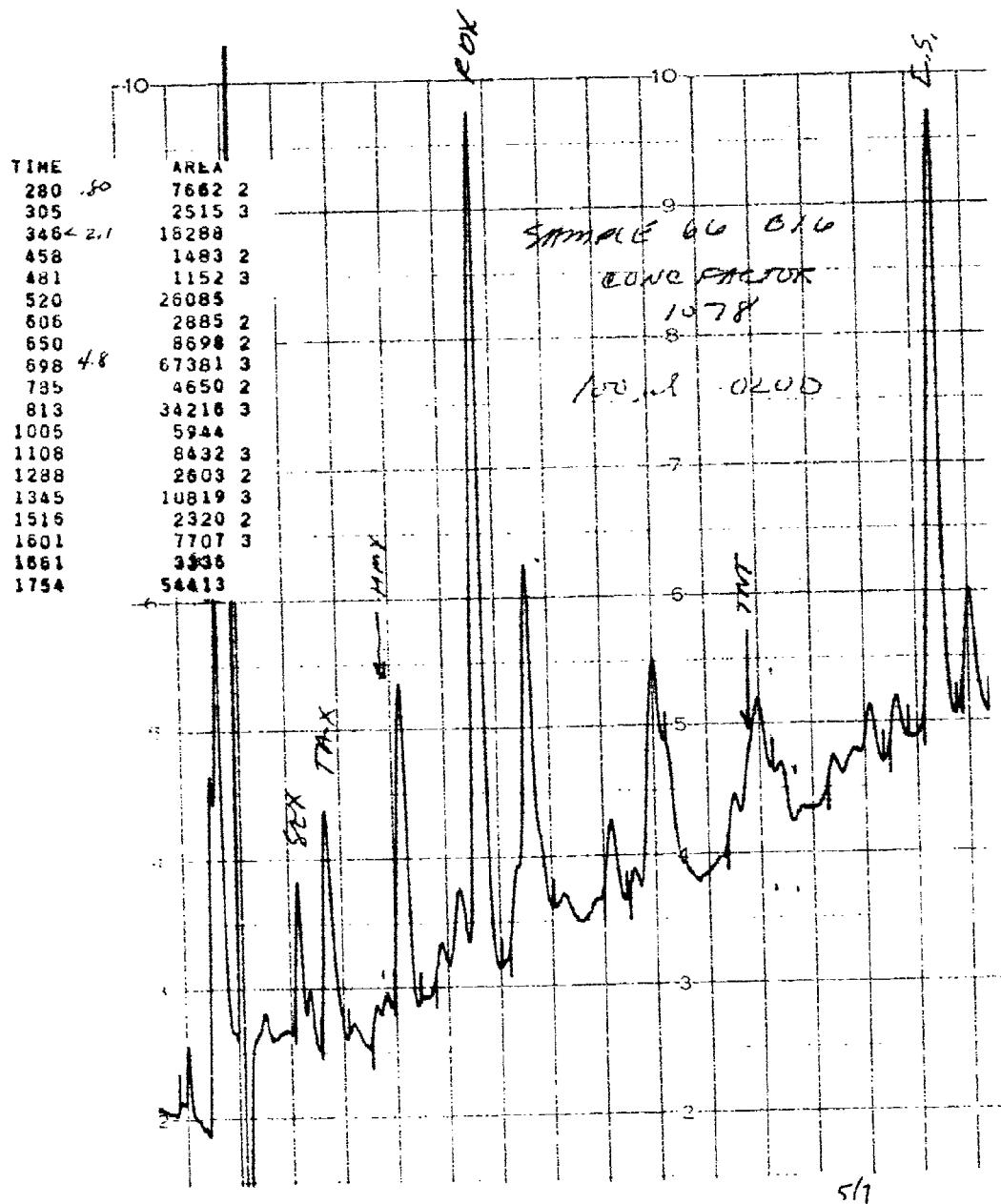


TIME	AREA
280	163
334	148
434	2511 2
485	10003 3
549	11420
605	6924
682	203562
809	10124 2
843	43725 3
885	626
936	25683
1048	8221 1
1081	6199 2
1118	21606 2
1146	11997 2
1192	9739 3
1307	17315
1372	1498
1403	1445
1517	9314
1605	4948
1672	5971 2
1721	120604 3

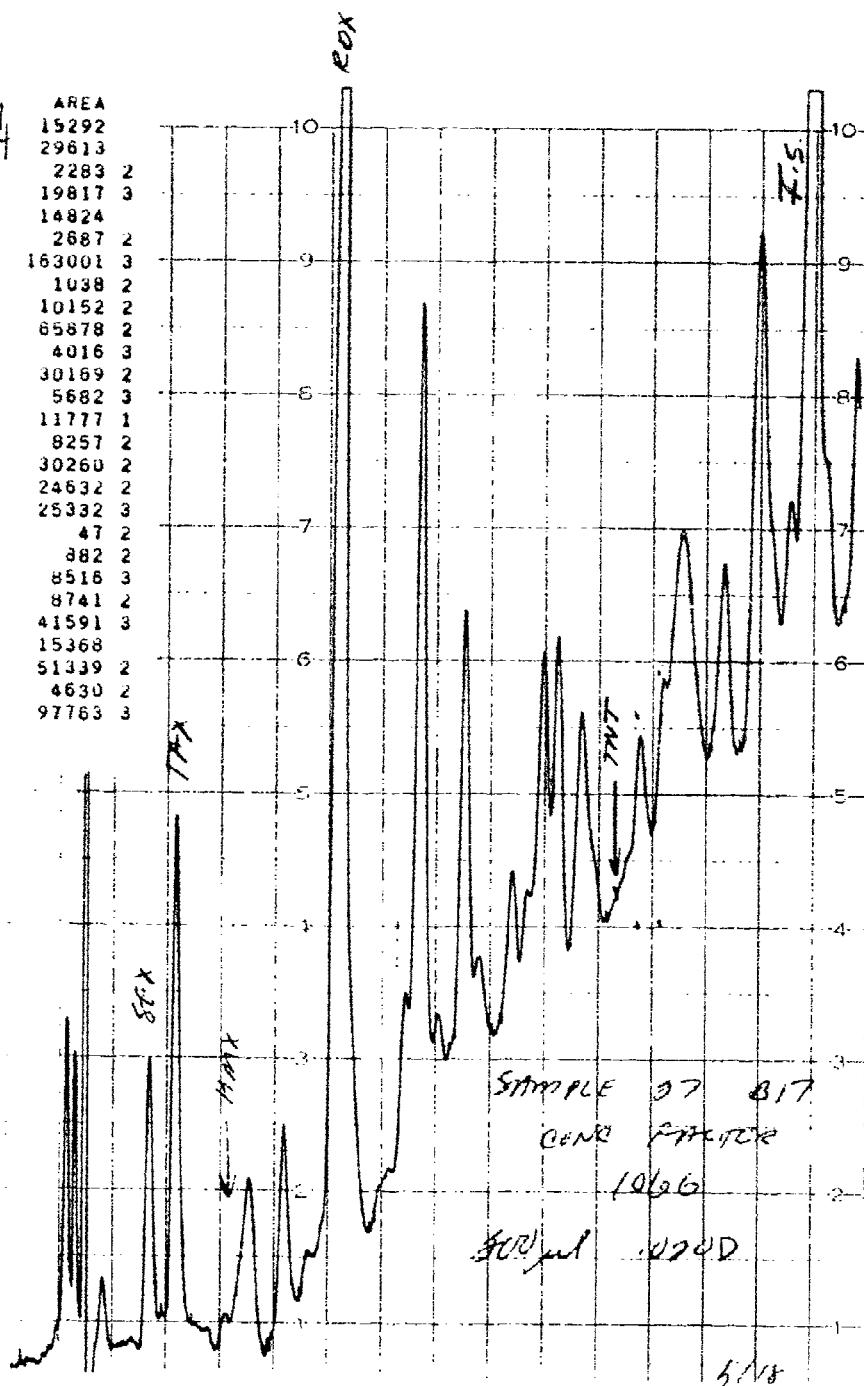


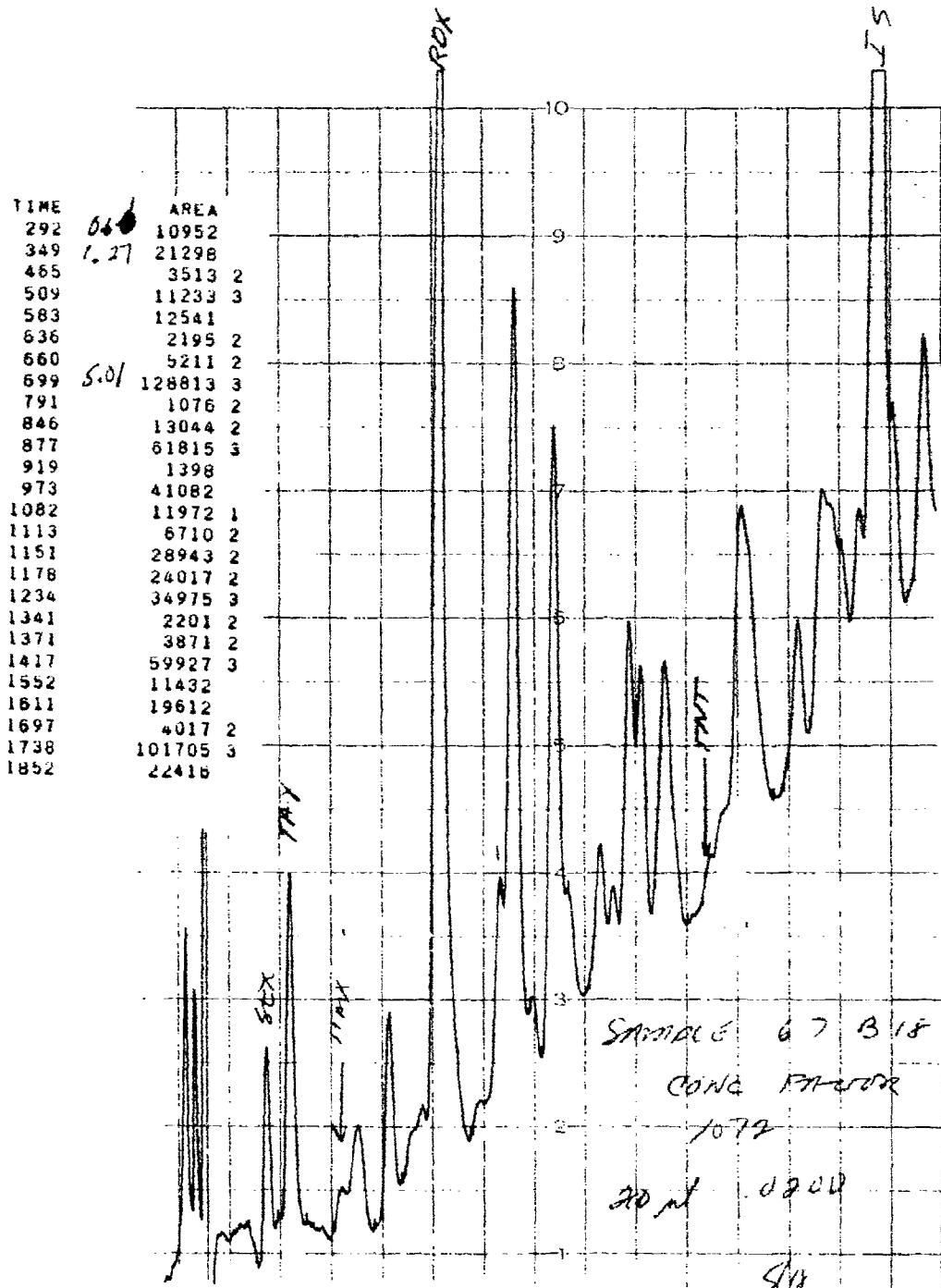
TIME	AREA
281	106
335	20810
437	35042
484	1431 2
552	31598 3
613	14177 2
676	6345 3
782	216985
762	4190 1
807	16956 2
841	59587 2
890	2495 2
934	19271 3
1044	10171 1
1076	7885 2
1113	24126 2
1142	18763 2
1189	6974 3
1338	12624 3
1519	6544
1559	16208
1597	221 2
1633	1536 3
1671	7883 2
1716	111327 2
1756	2984 3
1829	7569





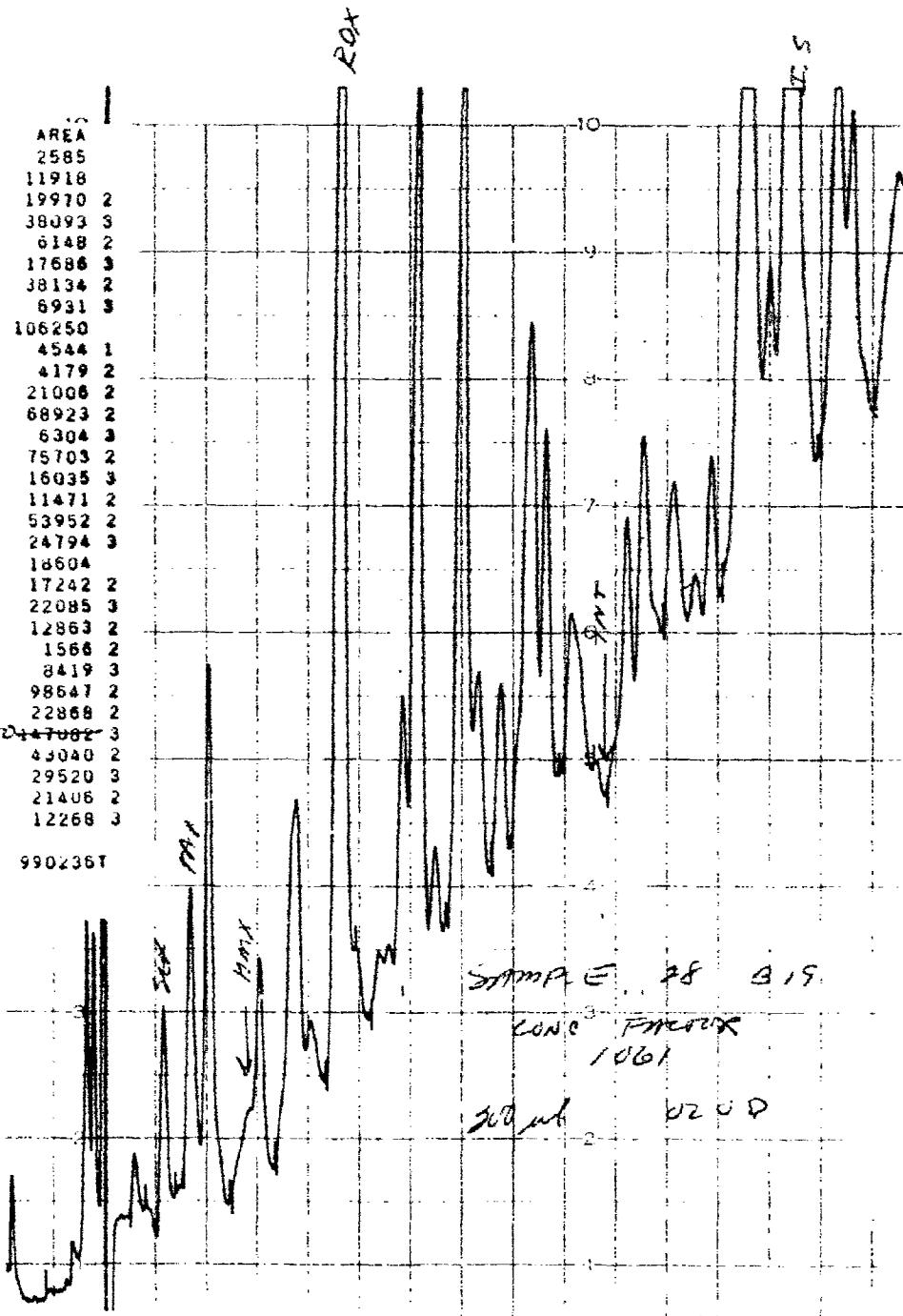
TIME	AREA
291	15292
349	29613
458	2283 2
517	19817 3
592	14824
645	2687 2
709	163001 3
807	1038 2
862	10152 2
893	65878 2
936	4016 3
993	30169 2
1025	5682 3
1100	11777 1
1133	8257 2
1169	30260 2
1201	24632 2
1256	25332 3
1337	47 2
1363	882 2
1387	8516 3
1439	8741 2
1480	41591 3
1573	15368
1649	51339 2
1720	4630 2
1760	97763 3



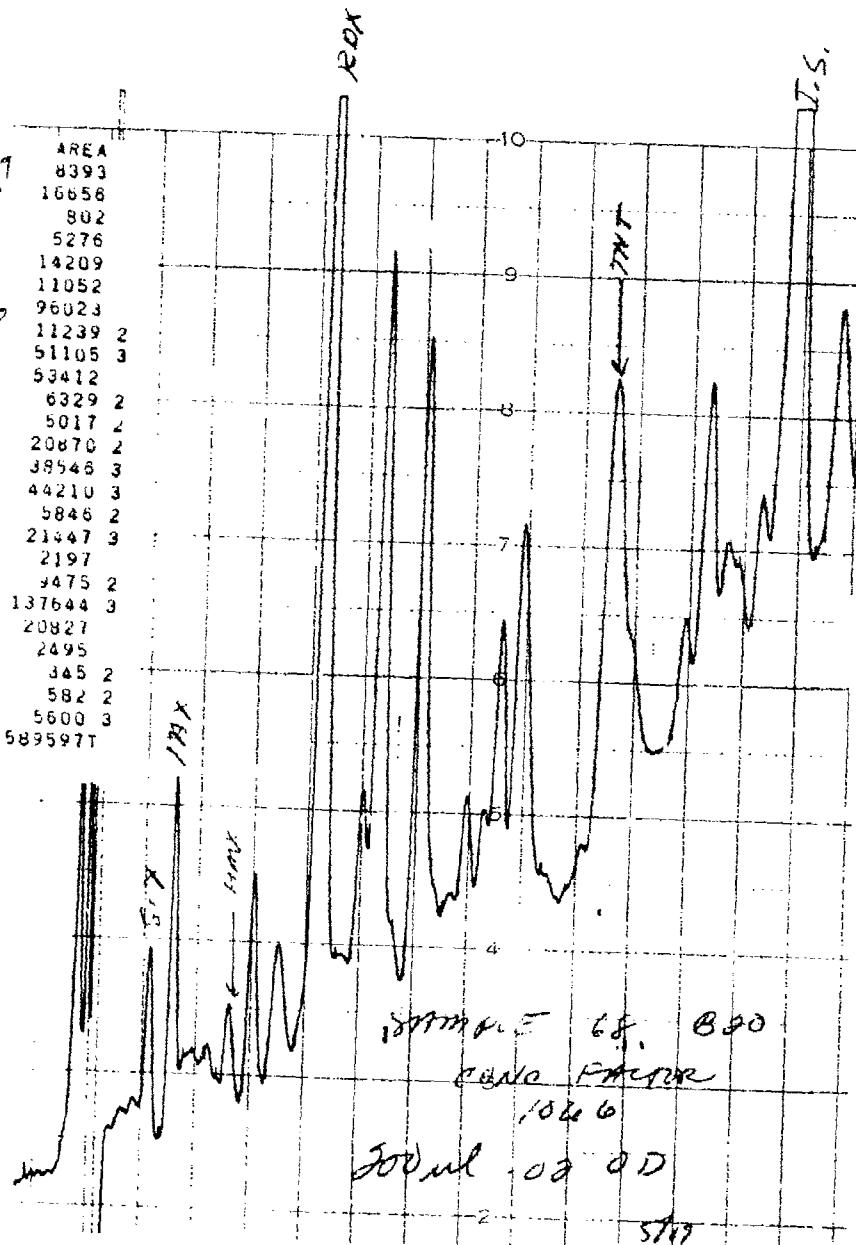


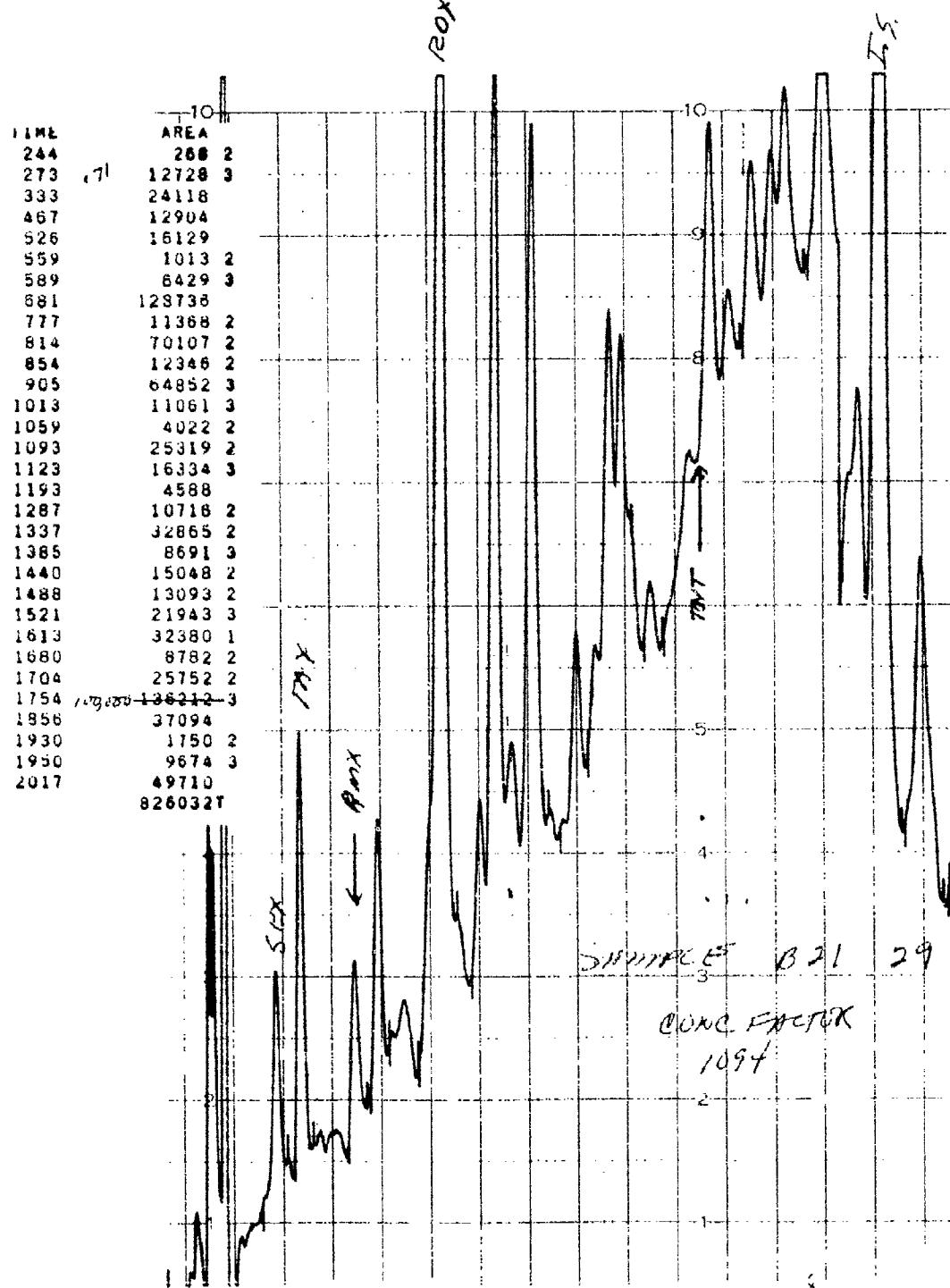
TIME	AREA
211	2585
278	11918
340	19970
382	38093
477	6148
506	17686
591	38134
627	6931
693	106250
788	4544
809	4179
844	21006
877	68923
921	6304
984	75703
1021	16035
1075	11471
1144	53952
1181	24794
1239	18604
1370	17242
1409	22085
1479	12863
1530	1566
1567	8419
1645	98647
1702	22868
1748	100,000+47002
1857	43040
1895	29520
2002	21406
2037	12268

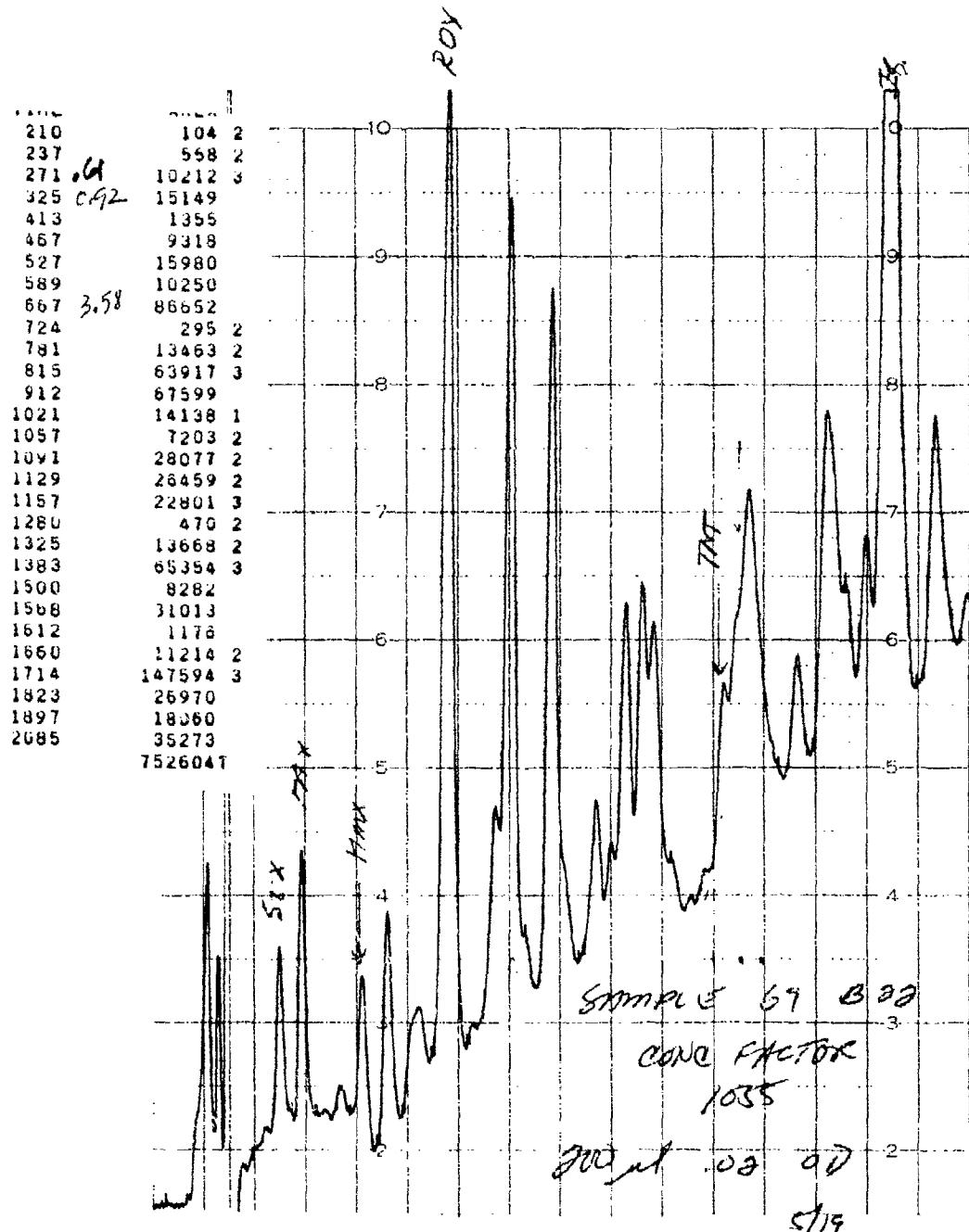
990136T



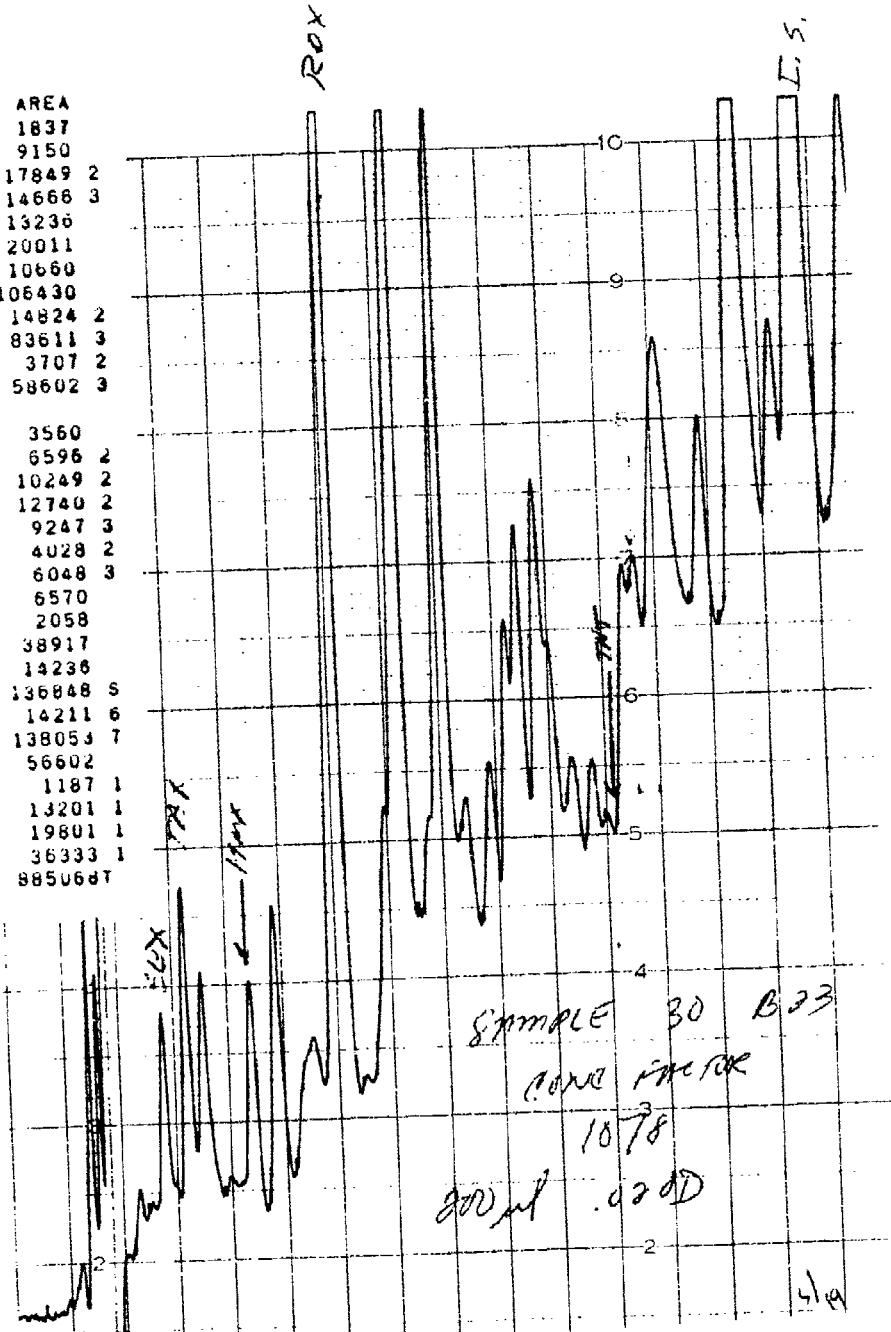
TIME	AREA
273	049
325	100
400	16656
455	802
505	5276
563	14209
650	11052
745	96023
761	11239 2
873	51105 3
981	53412
1019	6329 2
1053	5017 2
1095	20870 2
1294	38546 3
1461	44210 3
1508	5846 2
1553	21447 3
1629	2197
1691	3475 2
1797	137644 3
1865	20827
1933	2495
2074	345 2
2114	582 2
	5600 3
	589597T

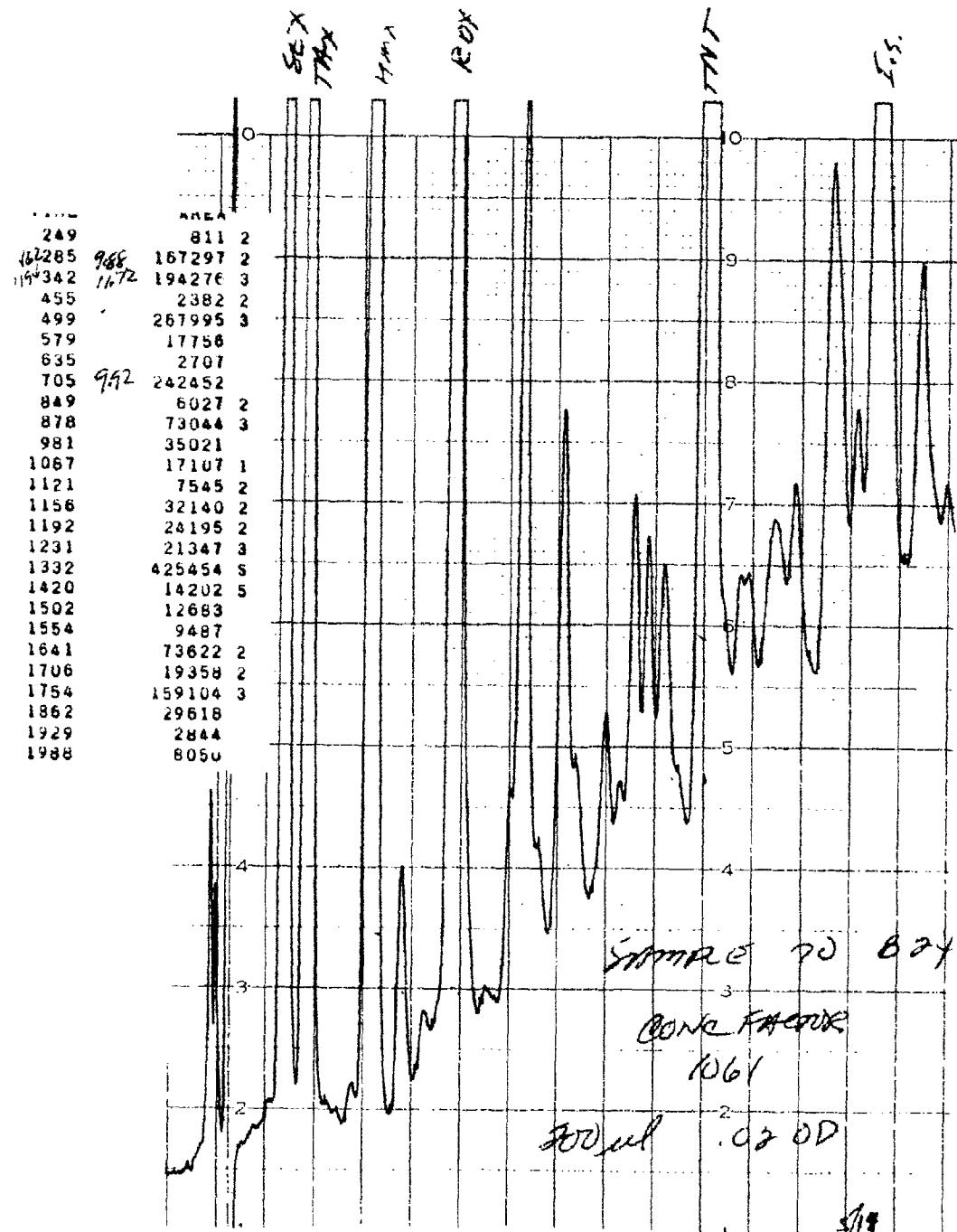




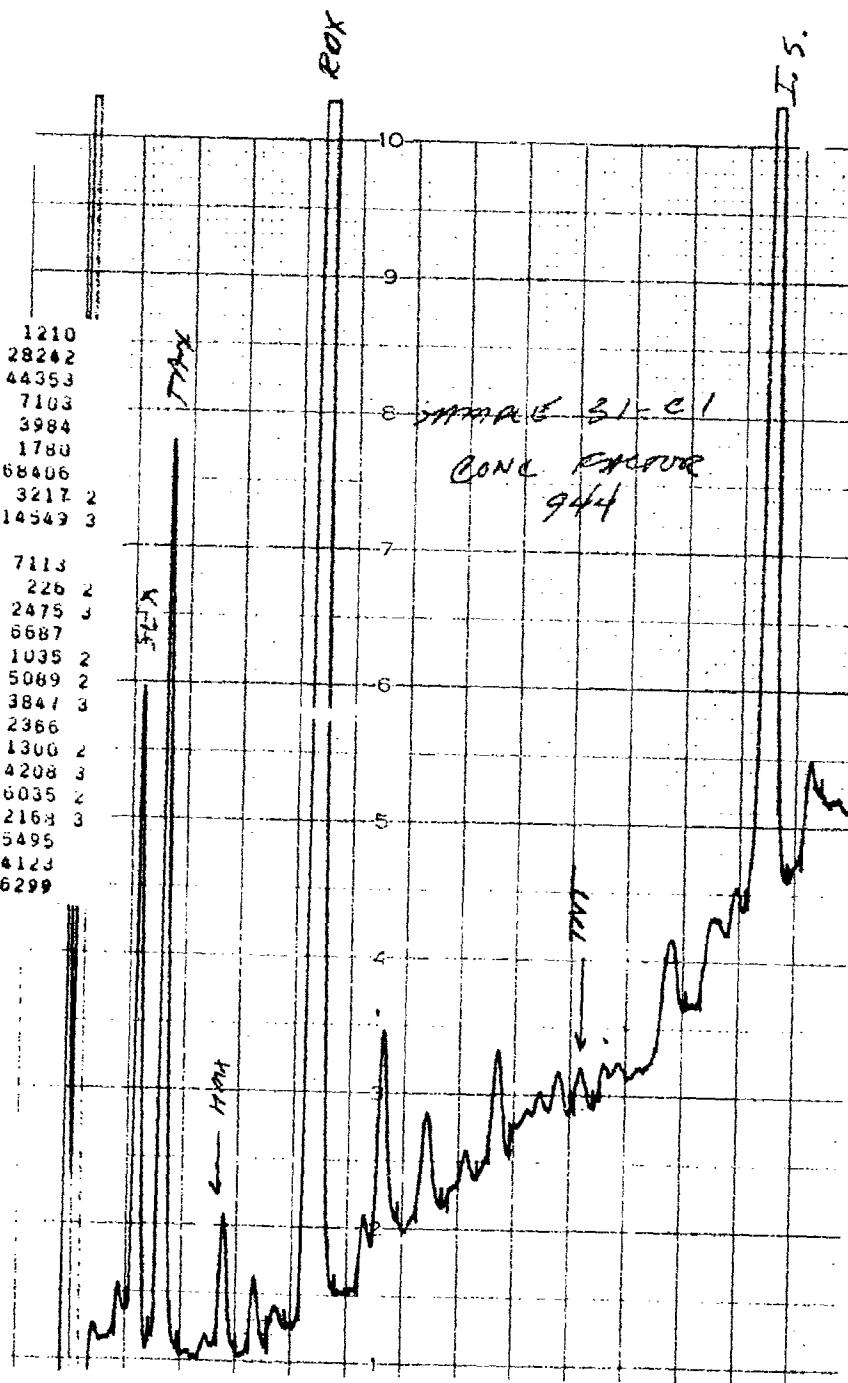


TIME	AREA
213	1837
158 269	9150
1190 323	17849 2
360	14668 3
465	13236
521	20011
589	10660
661 430	106430
775	14824 2
807	83611 3
875	3707 2
905	58602 3
956	3560
1009	6596 2
1050	10249 2
1079	12740 2
1120	9247 3
1191	4028 2
1235	6048 3
1313	6570
1337	2058
1394	38917
1486	14236
1567	136848 S
1647	14211 6
1700	138053 7
1809	56602
1939	1187 1
2053	13201 1
2122	19801 1
2160	36333 1
2160	885068T

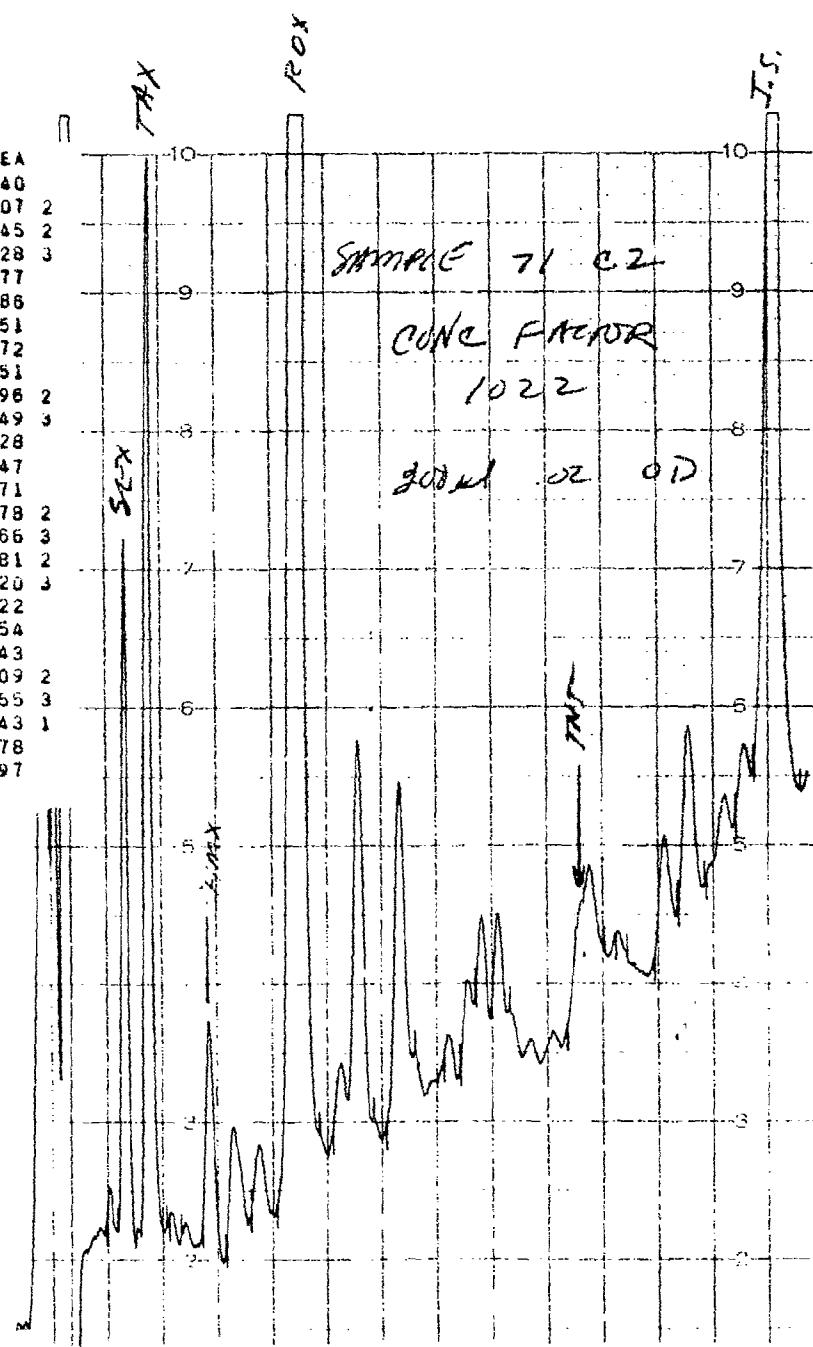




241 1210
 277 28242
 333 44353
 471 7103
 538 3984
 583 1780
 661 12.0 268406
 778 3217 2
 815 14549 3
 913 7113
 963 226 2
 999 2475 3
 1066 6687
 1105 1035 2
 1158 5089 2
 1198 3841 3
 1246 2366
 1297 1300 2
 1438 4208 3
 1527 6035 2
 1578 2168 3
 1641 105495
 1738 4123
 2074 6299

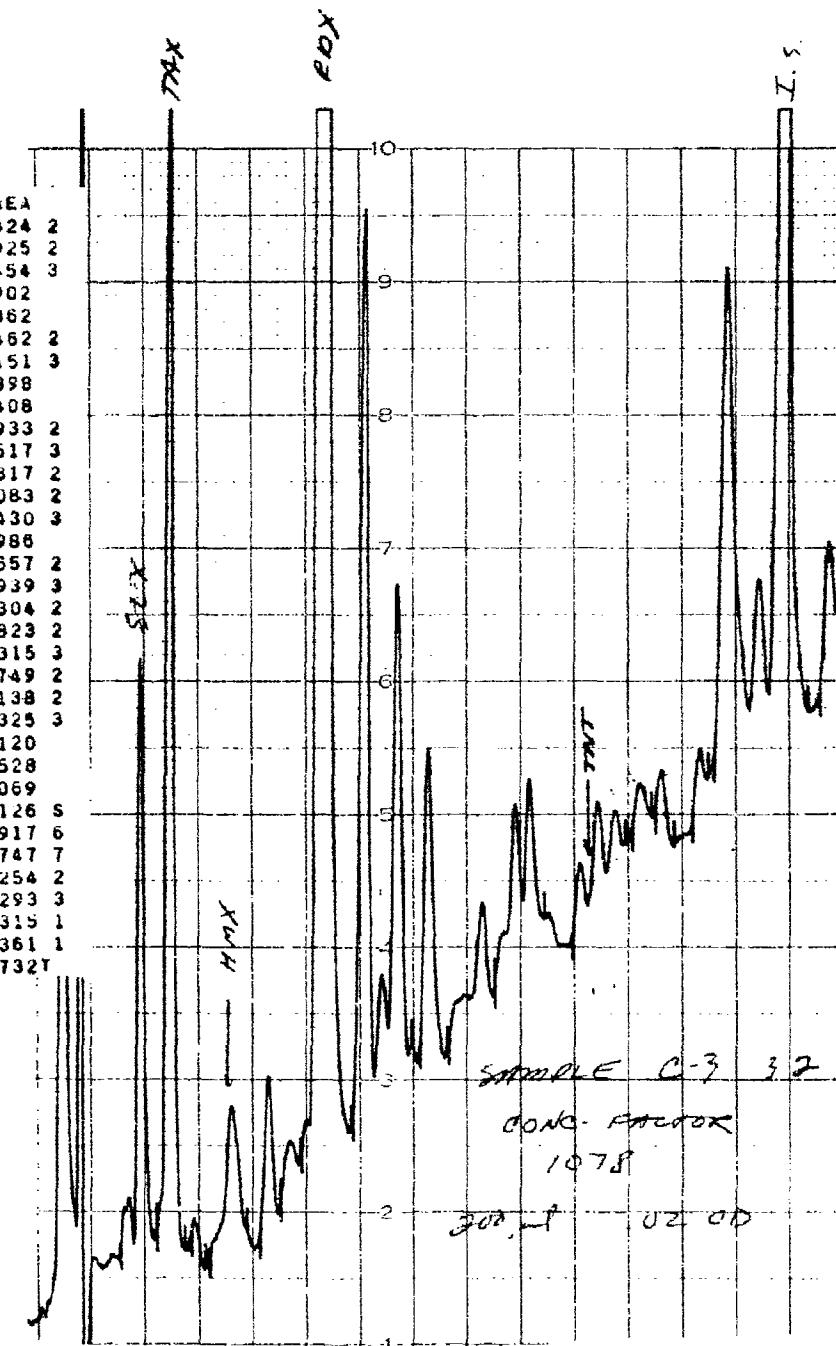


TIME	AREA
239	1540
273	30507 2
302	345 2
325	3.21 53128 3
373	677
461	13486
513	9551
569	4972
651	14.1 335051
752	4896 2
790	26949 3
882	21328
987	1747
1029	2871
1061	4878 2
1097	5766 3
1278	6381 2
1297	8420 3
1353	522
1459	7754
1512	13743
1559	309 2
1590	3355 3
1635	6043 1
1696	108378
1789	7397

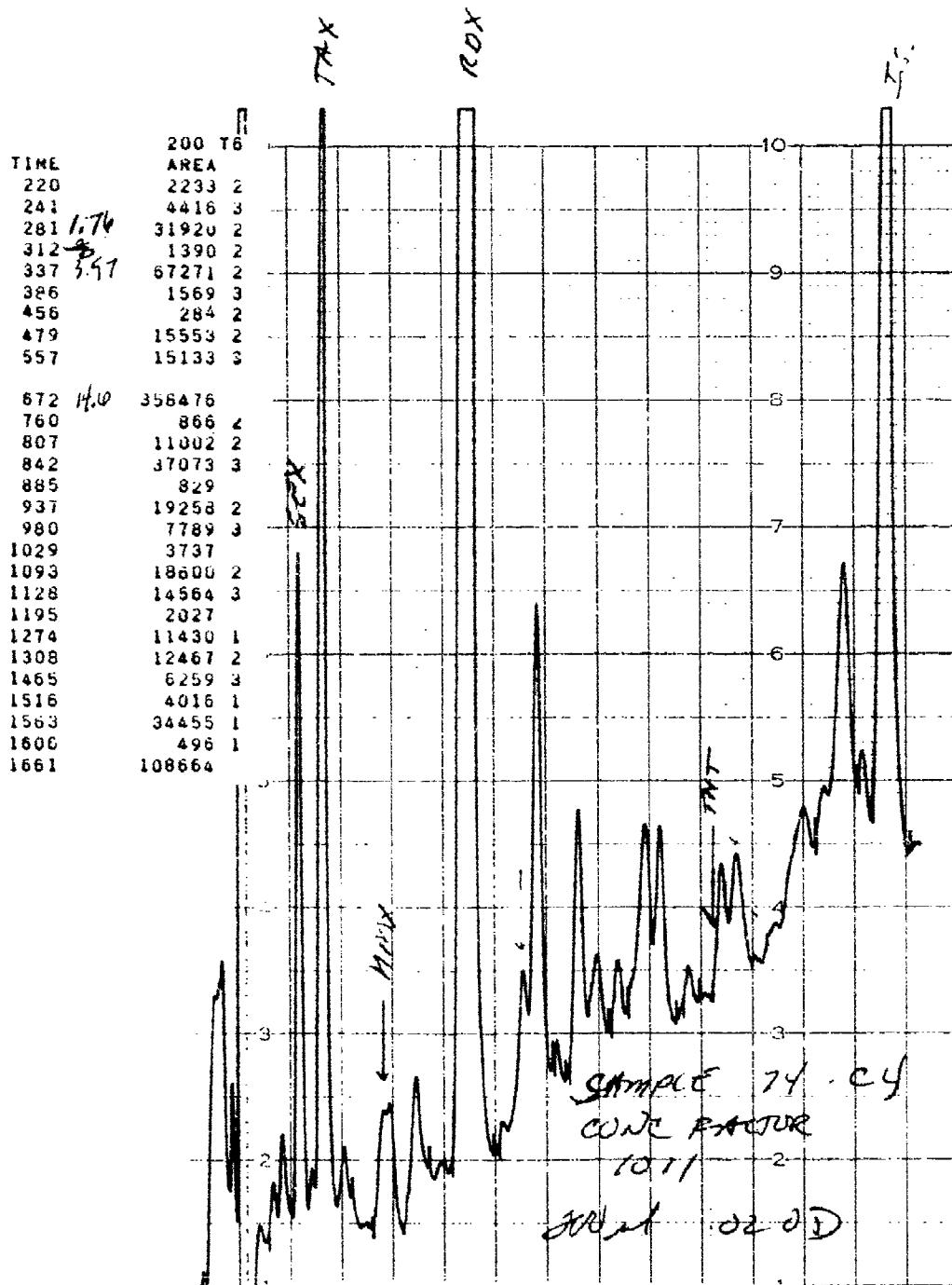


TIME

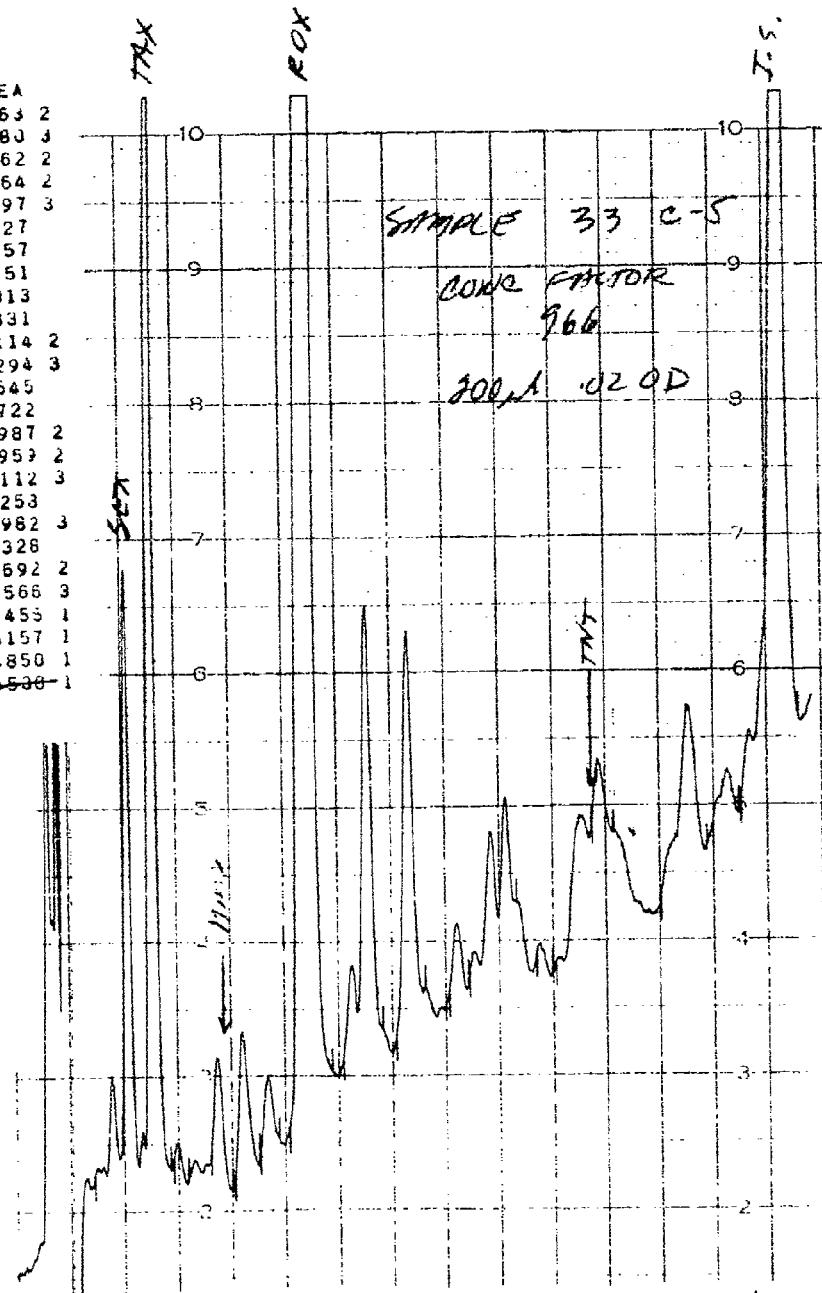
235	1424	2
245	1925	2
271	30454	3
333	64902	
392	1362	
433	462	2
475	13151	3
559	9398	
584	3408	
642	1933	2
677	370517	3
773	61317	2
815	7083	2
849	31430	3
918	21986	
977	1657	2
1038	10939	3
1084	2304	2
1113	11823	2
1145	10315	3
1257	3749	2
1297	6138	2
1336	3325	3
1389	3120	
1440	3528	
1525	3069	
1585	76126	5
1657	8917	6
1709	109747	7
1815	11254	2
1852	13293	3
1988	2315	1
2126	92361	1
	994732	

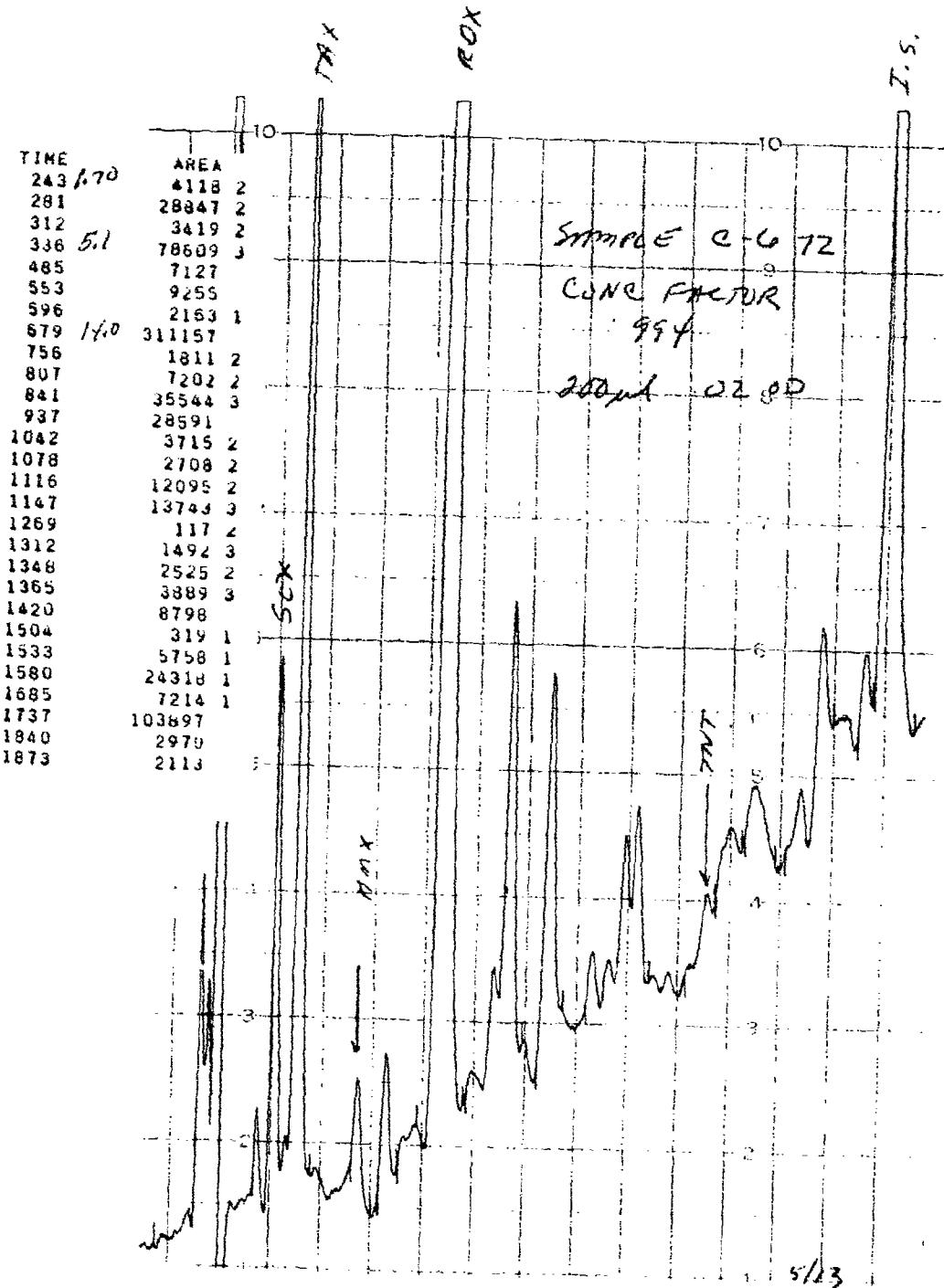


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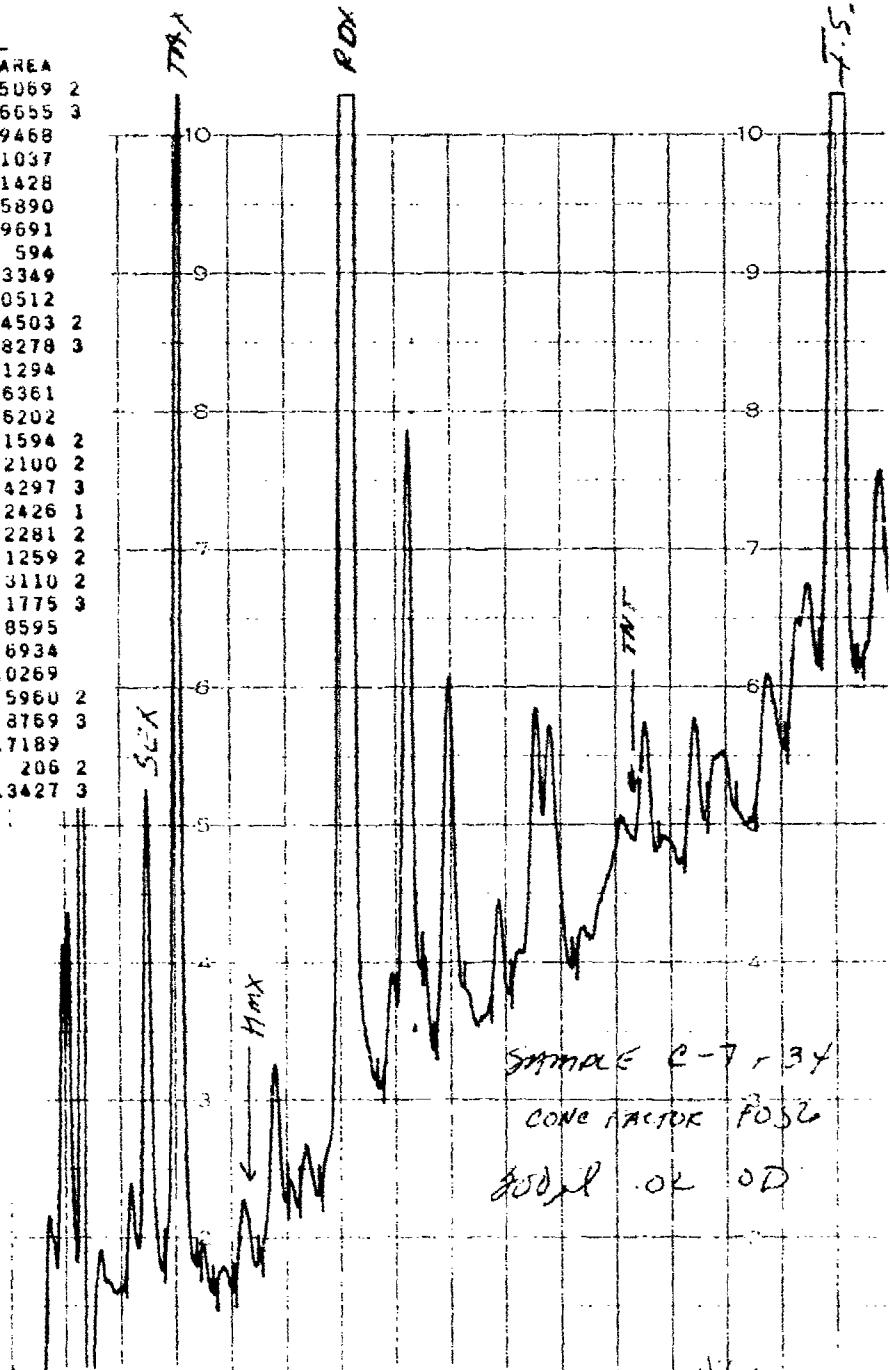


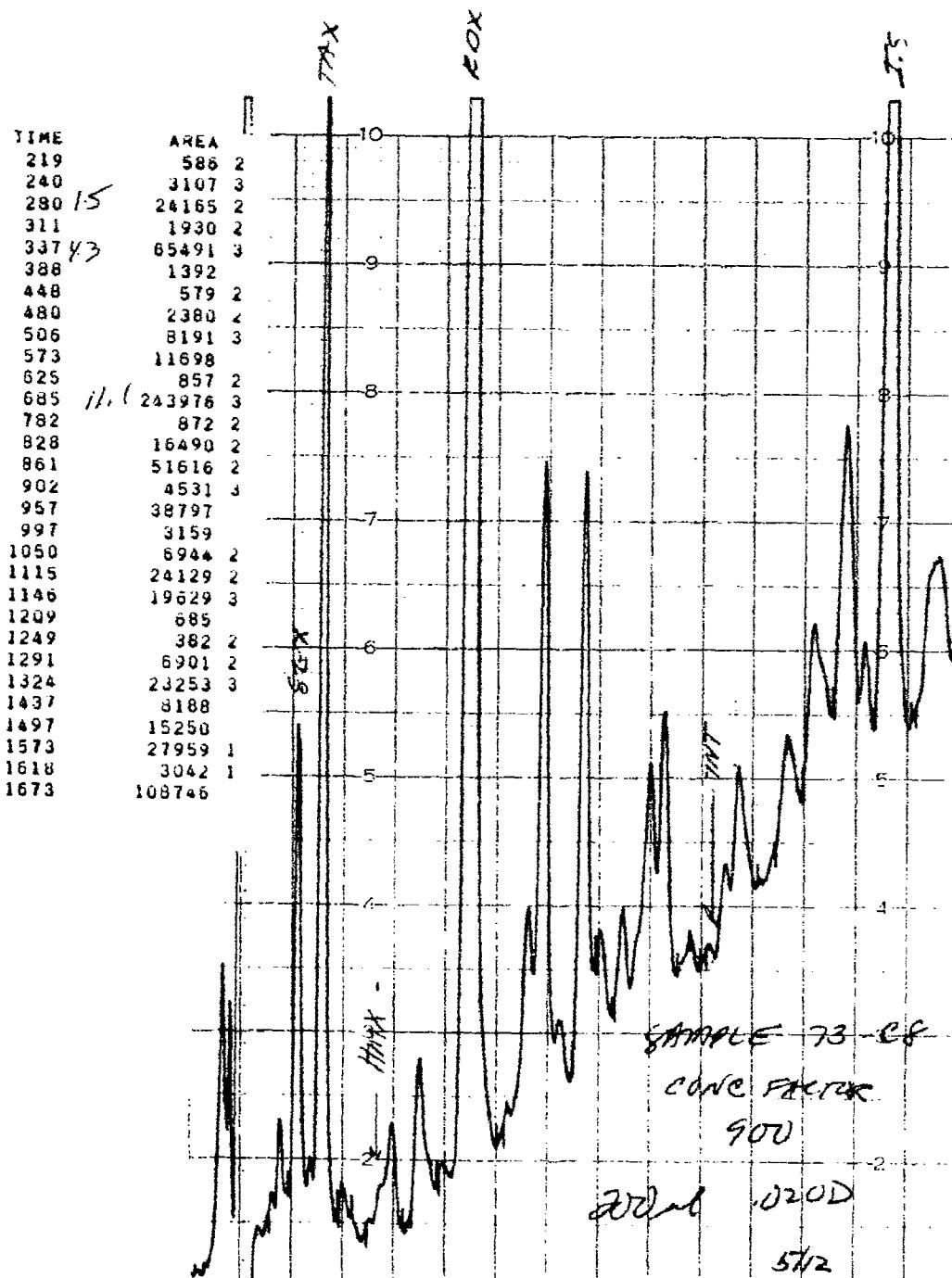
TIME	AREA
214	563 2
250	3480 3
286	28162 2
318	764 2
341	68197 3
396	1427
488	7657
545	10751
603	5013
689	346331
794	6114 2
832	31294 3
925	29545
1033	4722
1072	987 2
1109	6959 2
1144	7112 3
1216	1253
1309	3982 3
1353	5328
1513	2692 2
1556	19566 3
1621	1455 1
1643	5157 1
1693	4850 1
1759	100,000 + 34530 1

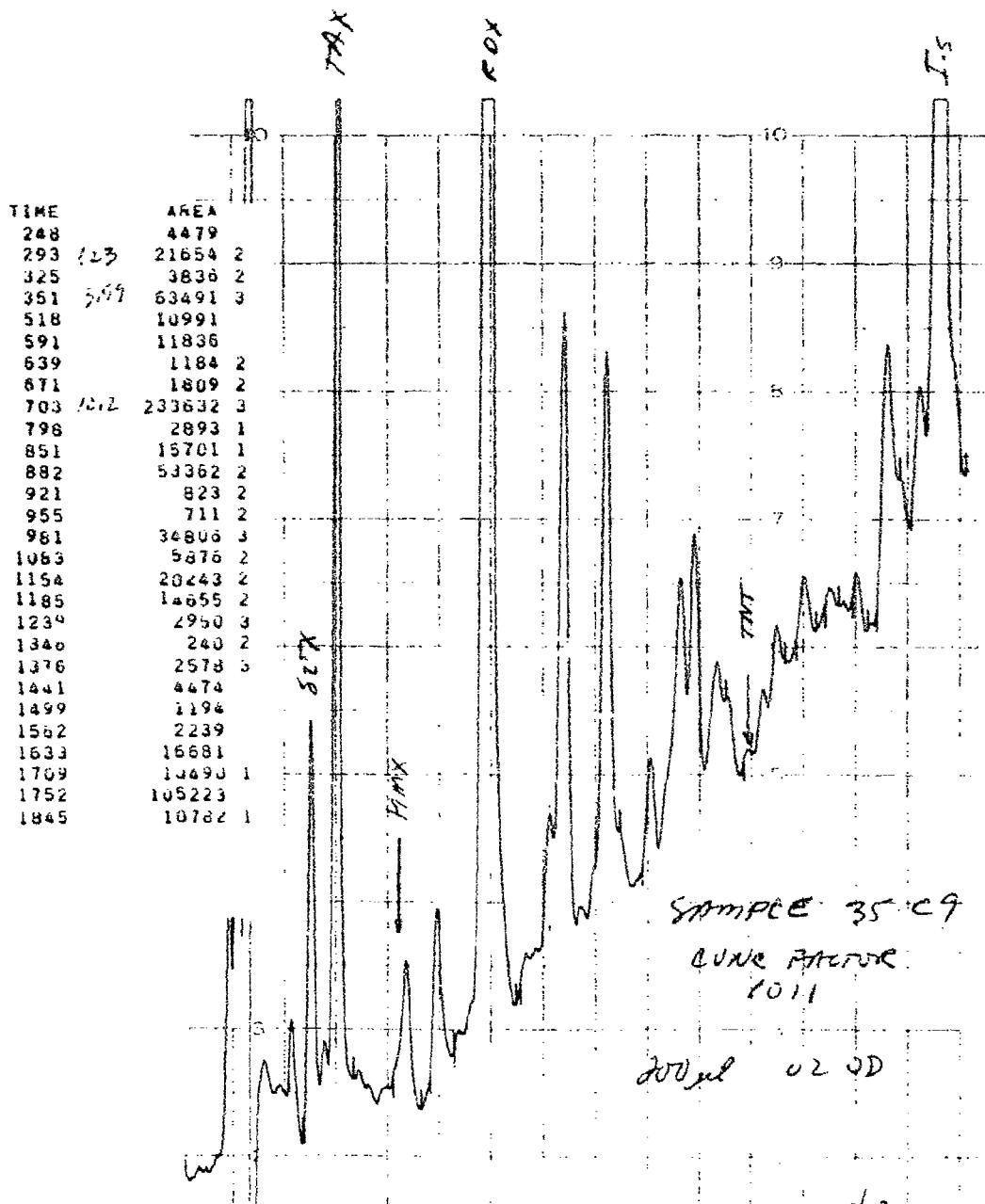




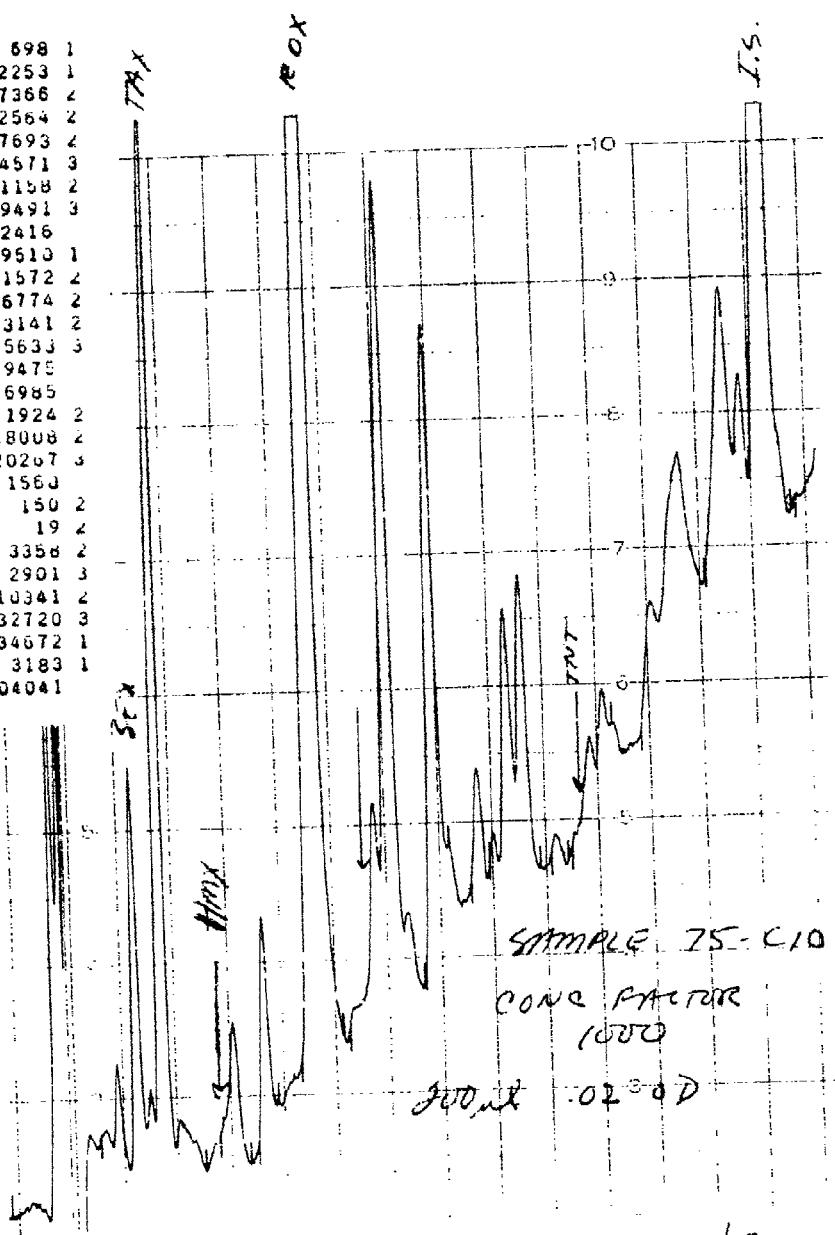
TIME	AREA
260	5069 2
294	26655 3
360	69468
414	1037
454	1428
506	5890
577	9691
608	594
647	3349
730 10.2	290512
834	4503 2
869	38278 3
902	1294
959	26361
1067	6202
1109	1594 2
1148	22100 2
1177	24297 3
1246	2426 1
1289	2281 2
1297	1259 2
1334	13110 2
1387	11775 3
1495	8595
1540	6934
1656	10269
1720	5960 2
1742	8769 3
1804	117189
1867	206 2
1899	13427 3



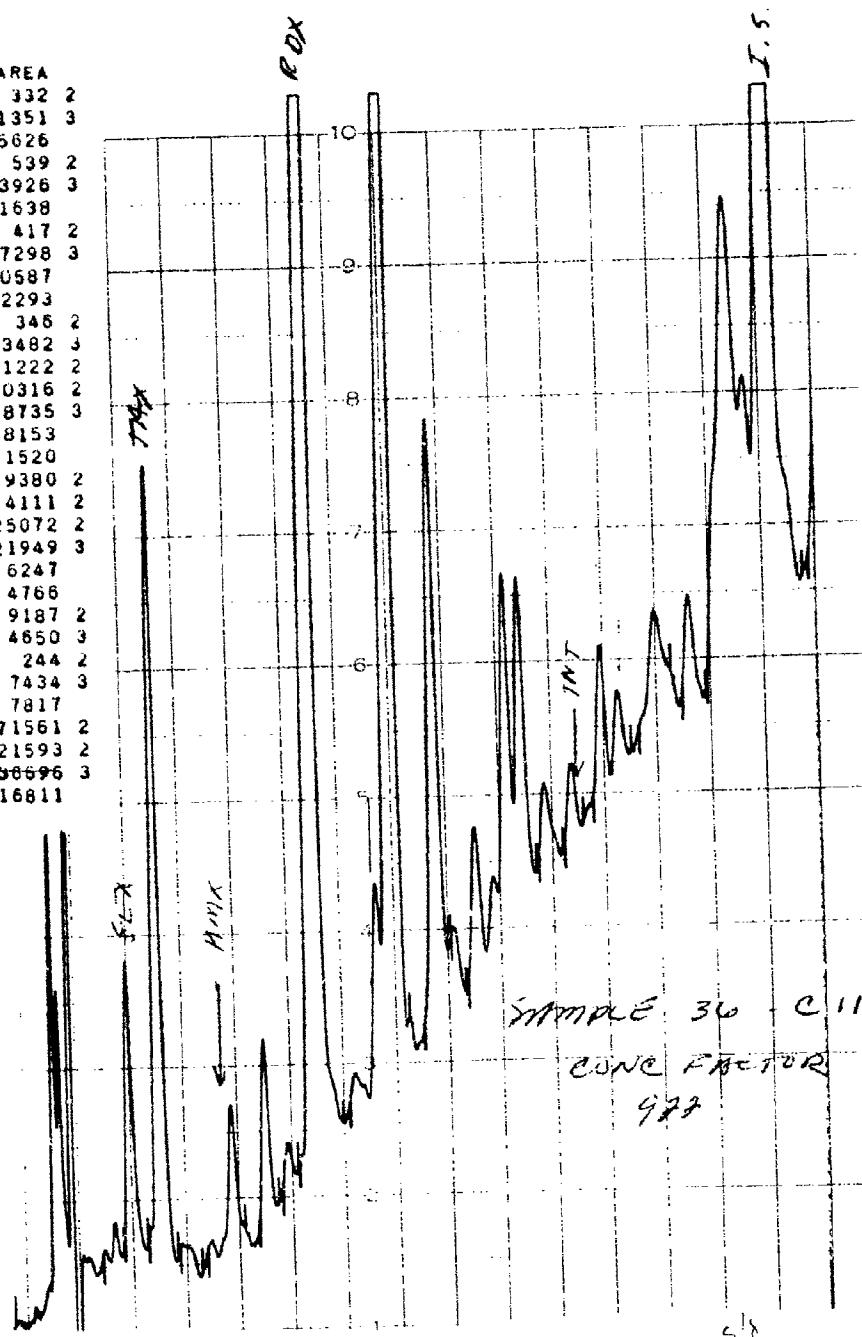




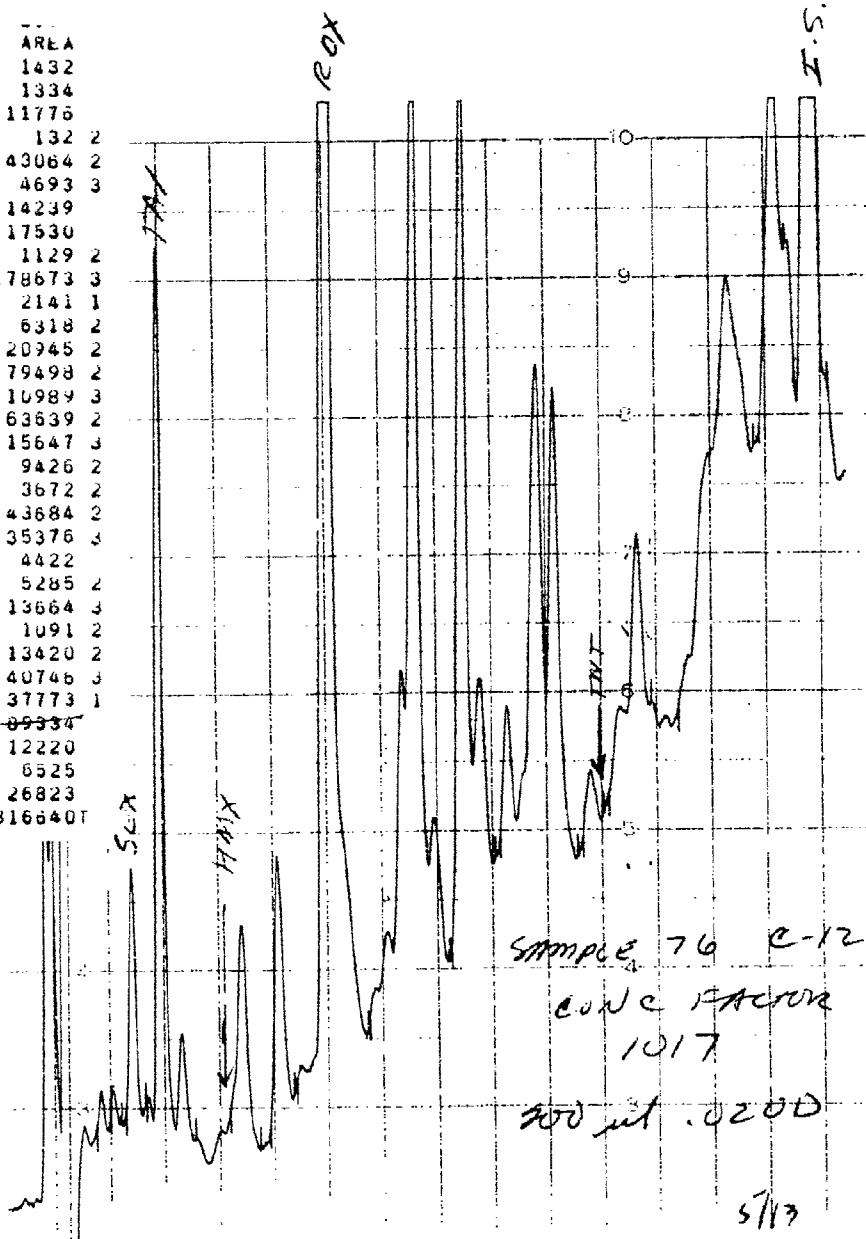
206	698	1
245	2253	1
288	2266	2
319	2564	2
345	37693	2
365	4571	3
485	1158	2
509	9491	3
561	12416	
695	983	219510 1
782	1572	2
840	16774	2
873	63141	2
911	5633	3
973	39475	
1072	6985	
1105	1924	2
1141	18008	2
1175	20267	3
1245	1560	
1289	150	2
1299	19	2
1326	3358	2
1358	2901	3
1473	10341	2
1541	32720	3
1642	34672	1
1683	3183	1
1731	104041	

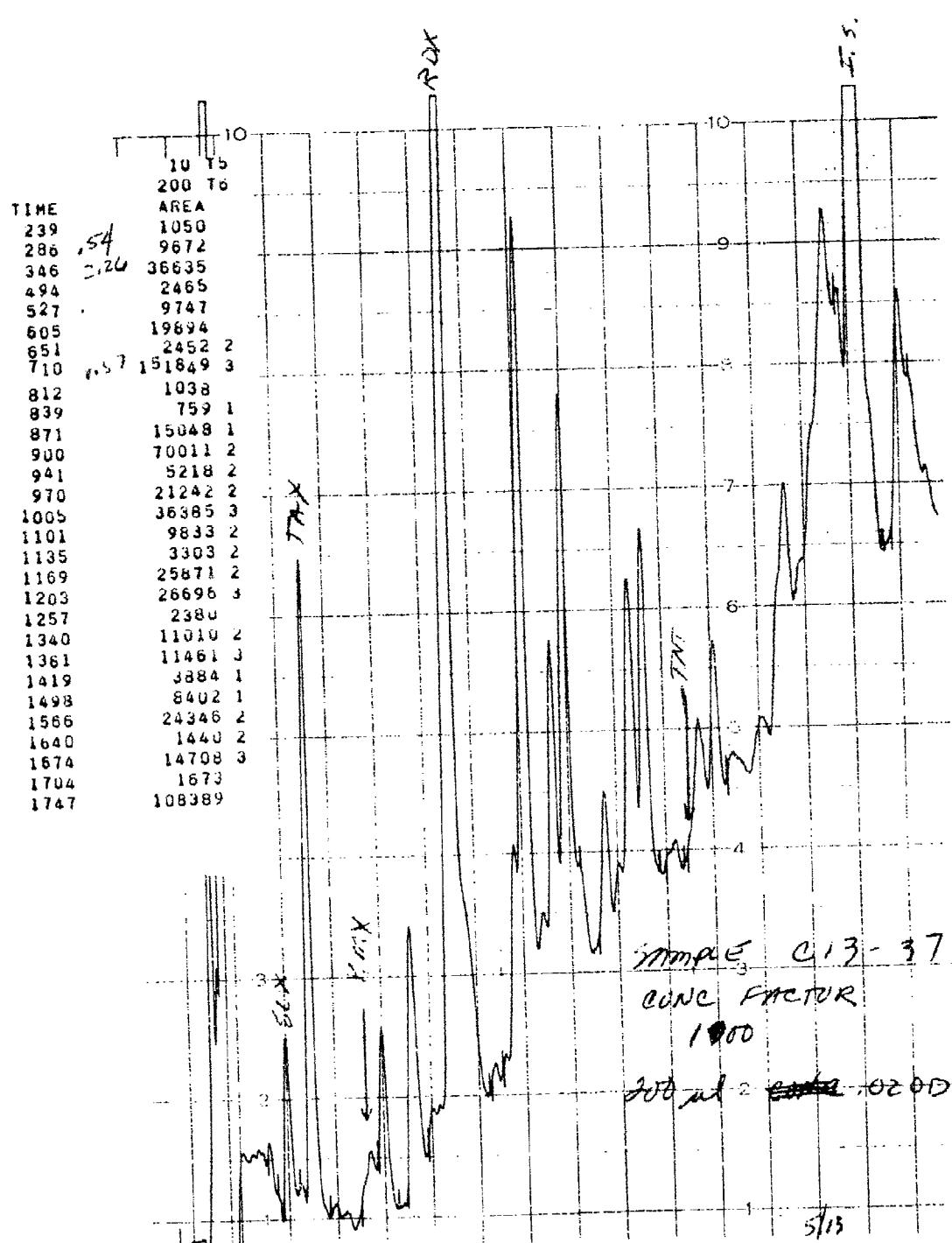


TIME	AREA
204	332 2
229	1351 3
266	15626
309	539 2
331	43926 3
375	1638
439	417 2
496	7298 3
569	10587
620	2293
648	346 2
682	163482 3
773	1222 2
831	10316 2
865	138735 3
965	38153
1004	1520
1057	9380 2
1096	4111 2
1129	25072 2
1162	21949 3
1216	6247
1277	4766
1345	9187 2
1383	4650 3
1437	244 2
1469	7434 3
1544	7817
1635	71561 2
1676	21593 2
1723	196696 3
1824	16811

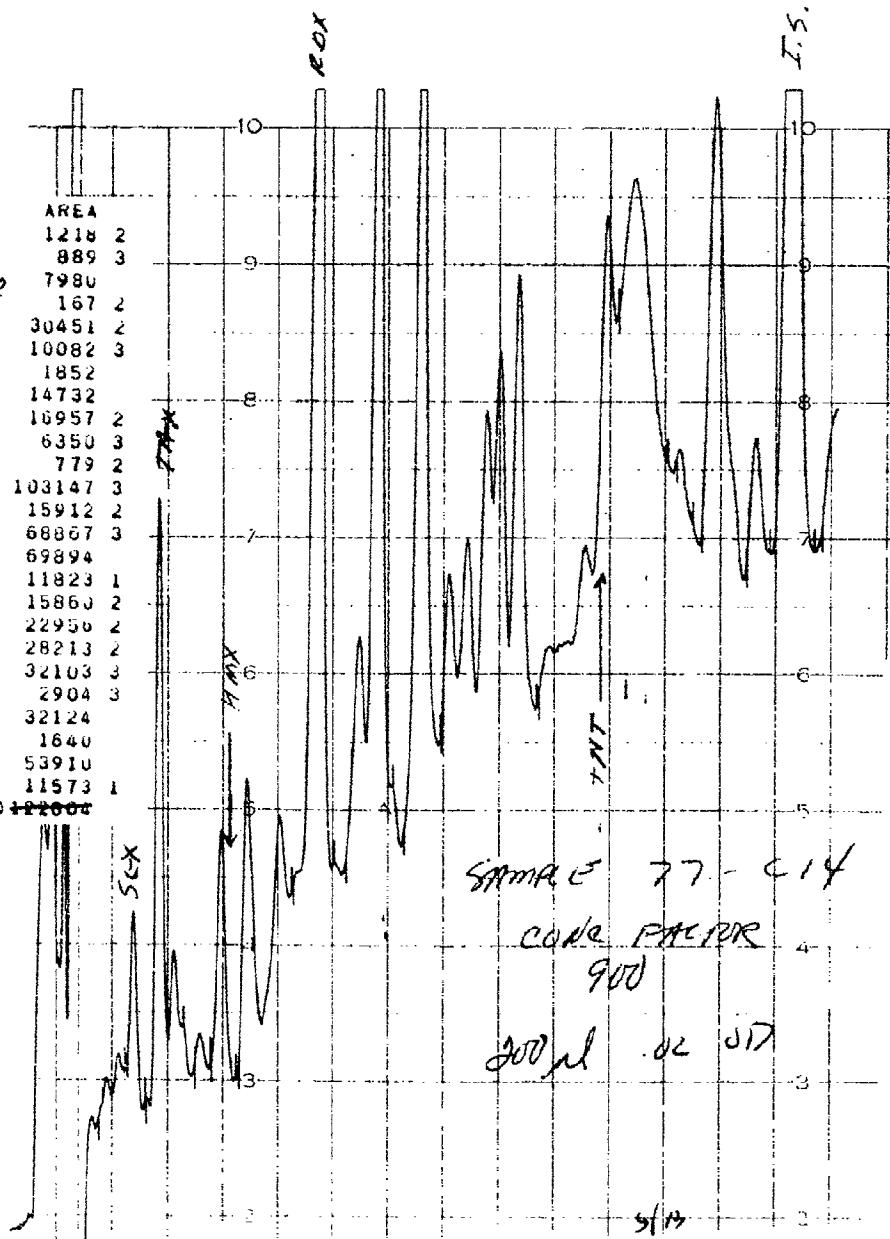


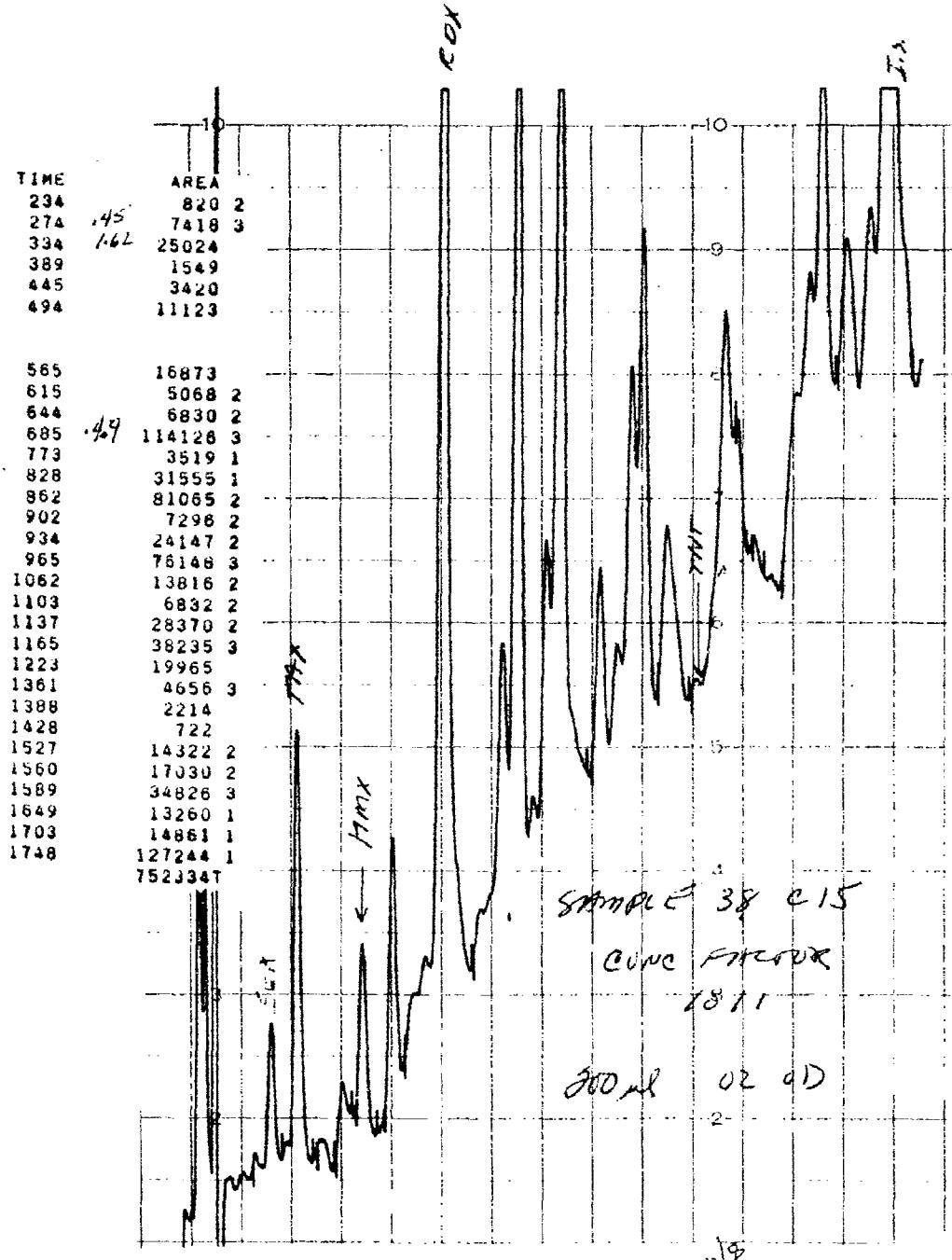
TIME	AREA
219	1432
245	1334
289	11776
320	132 2
350	283 43064 2
397	4693 3
530	14239
609	17530
658	1129 2
718	8.24 178673 3
824	2141 1
850	6318 2
884	20945 2
912	79498 2
955	10989 3
1018	63639 2
1057	15647 3
1117	9426 2
1153	3672 2
1183	43684 2
1221	35376 3
1298	4422
1361	5285 2
1402	13664 3
1513	1091 2
1556	13420 2
1597	40746 3
1697	37773 1
1774	102028 89334
1877	12220
1960	6525
2070	26823
	8166401



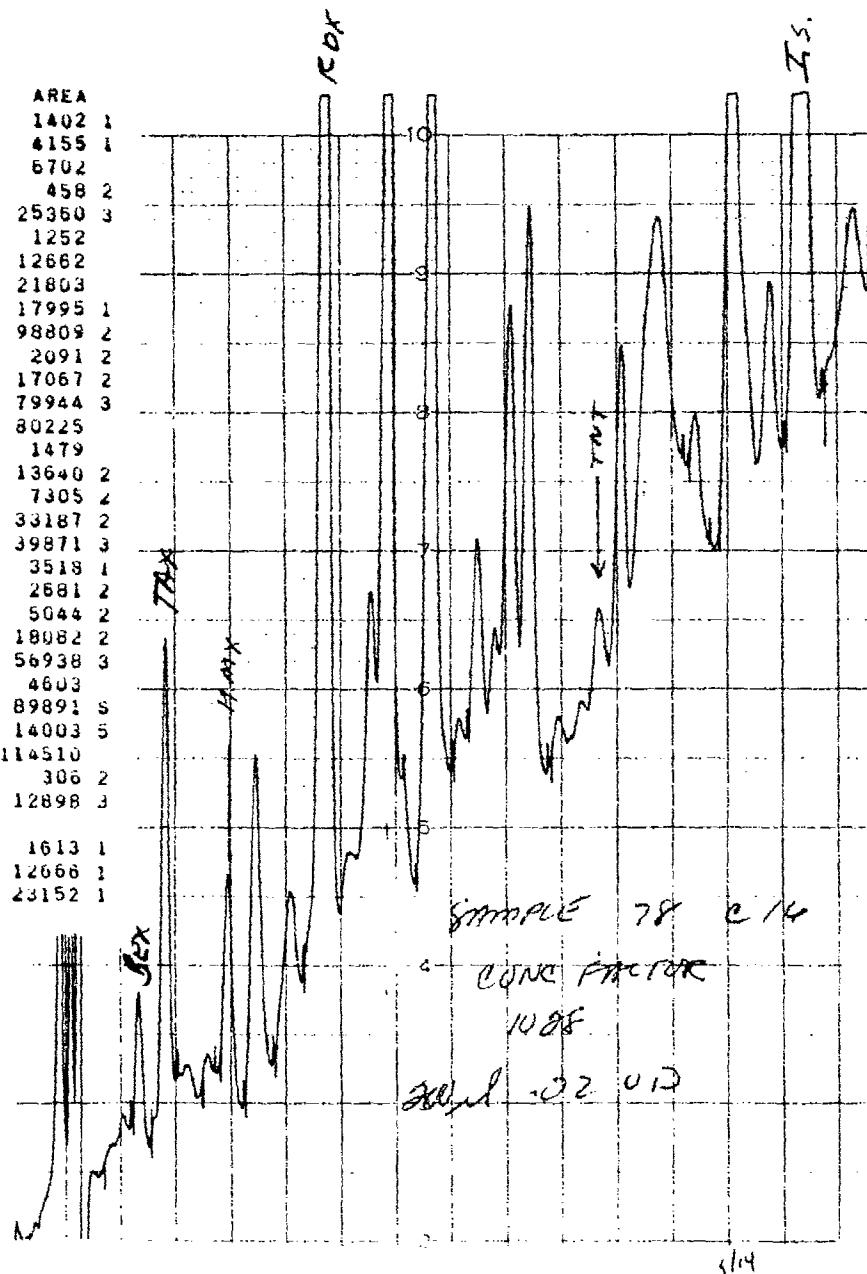


TIME AREA
 226 1218 2
 251 889 3
 284 7980 450
 313 167 2
 340 2.7 30451 2
 372 10082 3
 429 1852
 476 14732
 543 16957 2
 603 6350 3
 638 779 2
 683 5.2 103147 3
 777 15912 2
 814 68867 3
 909 69894
 973 11823 1
 1013 15860 2
 1055 22950
 1084 28213
 1124 32103 6
 1318 2904 6
 1377 32124
 1478 1640
 1554 53910
 1643 11573 1
 1719 100,000 420000

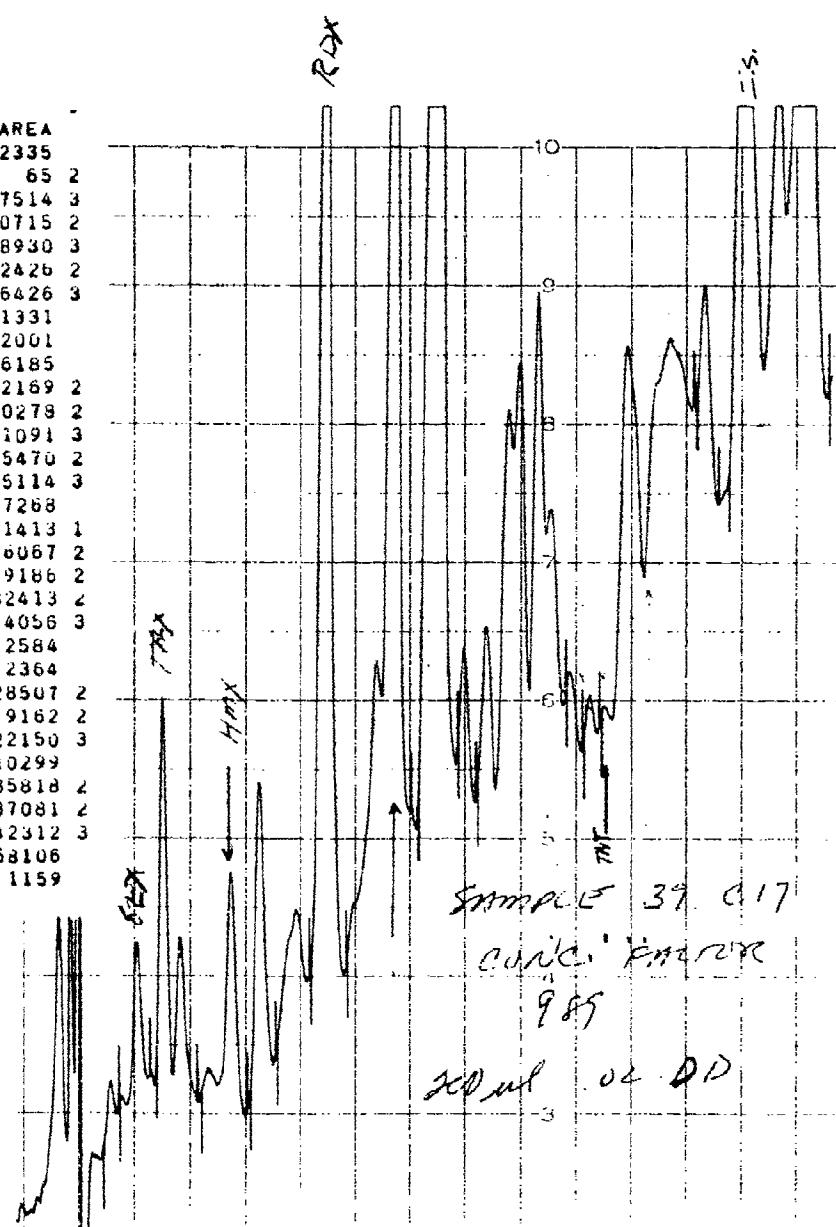




TIME	AREA
218	1402 1
245	4155 1
281	6702
316	458 2
338	1.68 25360 3
432	1252
477	12662
537	21803
609	17995 1
681	98809 2
733	2091 2
782	17067 2
817	79944 3
912	80225
973	1479
1013	13640 2
1051	7305 2
1084	33187 2
1121	39871 3
1185	3518 1
1229	2681 2
1266	5044 2
1313	18082 2
1389	56938 3
1475	4603
1553	89891 5
1632	14003 5
1700	114510
1762	306 2
1813	12898 3
1872	1613 1
1942	12666 1
1980	23152 1



TIME AREA
 216 2335
 238 65 2
 274 7514 3
 330 1/142 20715 2
 368 8930 3
 427 2426 2
 477 16426 3
 540 21331
 618 12001
 681 444 96185
 745 2169 2
 795 20278 2
 831 91091 3
 909 45470 2
 929 75114 3
 987 7268
 1035 11413 1
 1085 26067 2
 1106 29186 2
 1147 32413 2
 1175 14056 3
 1216 2584
 1261 2364
 1341 28907 2
 1407 9162 2
 1431 22150 3
 1510 10299
 1592 85818 2
 1667 37081 2
 1724 142312 3
 1829 58106
 1893 1159

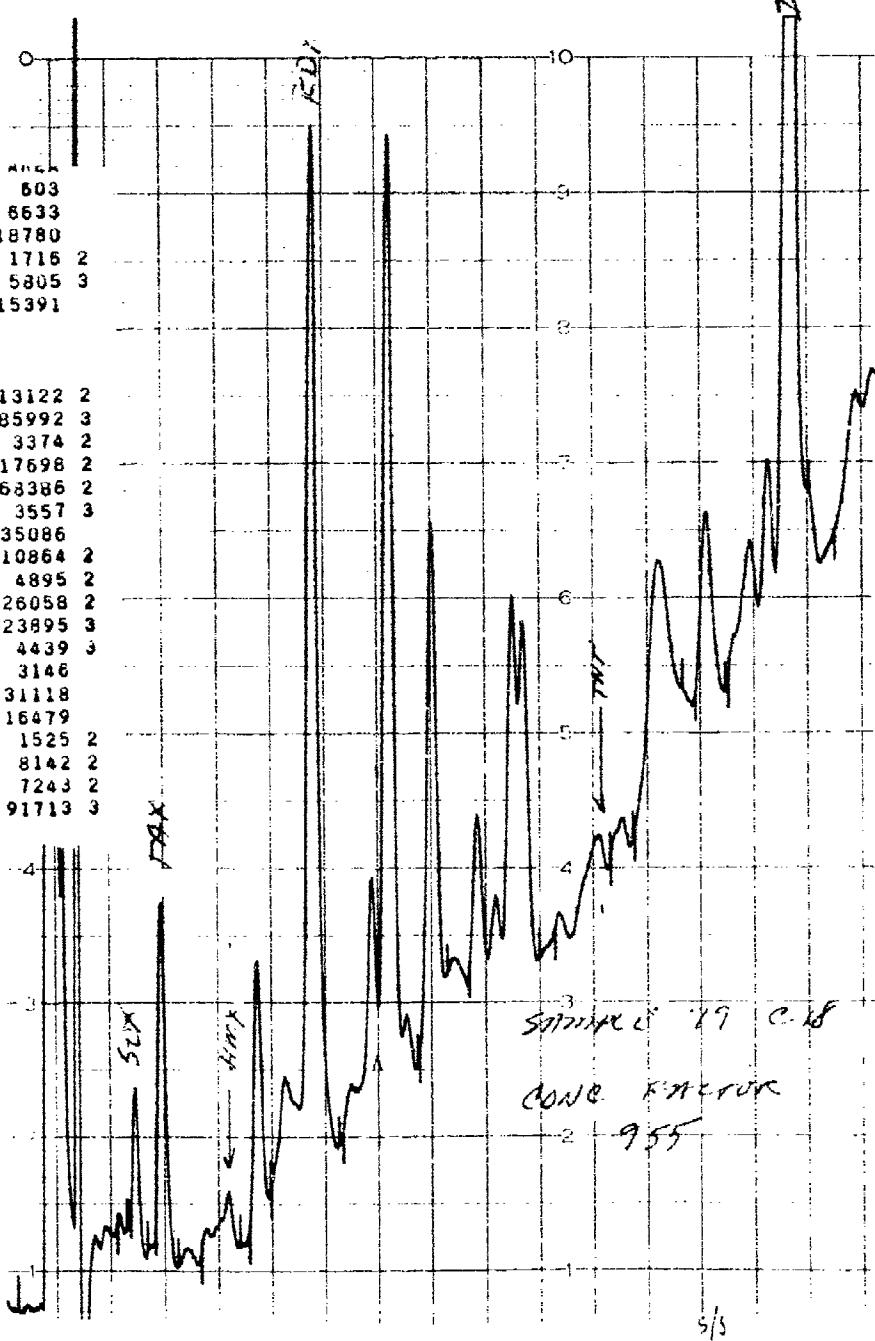


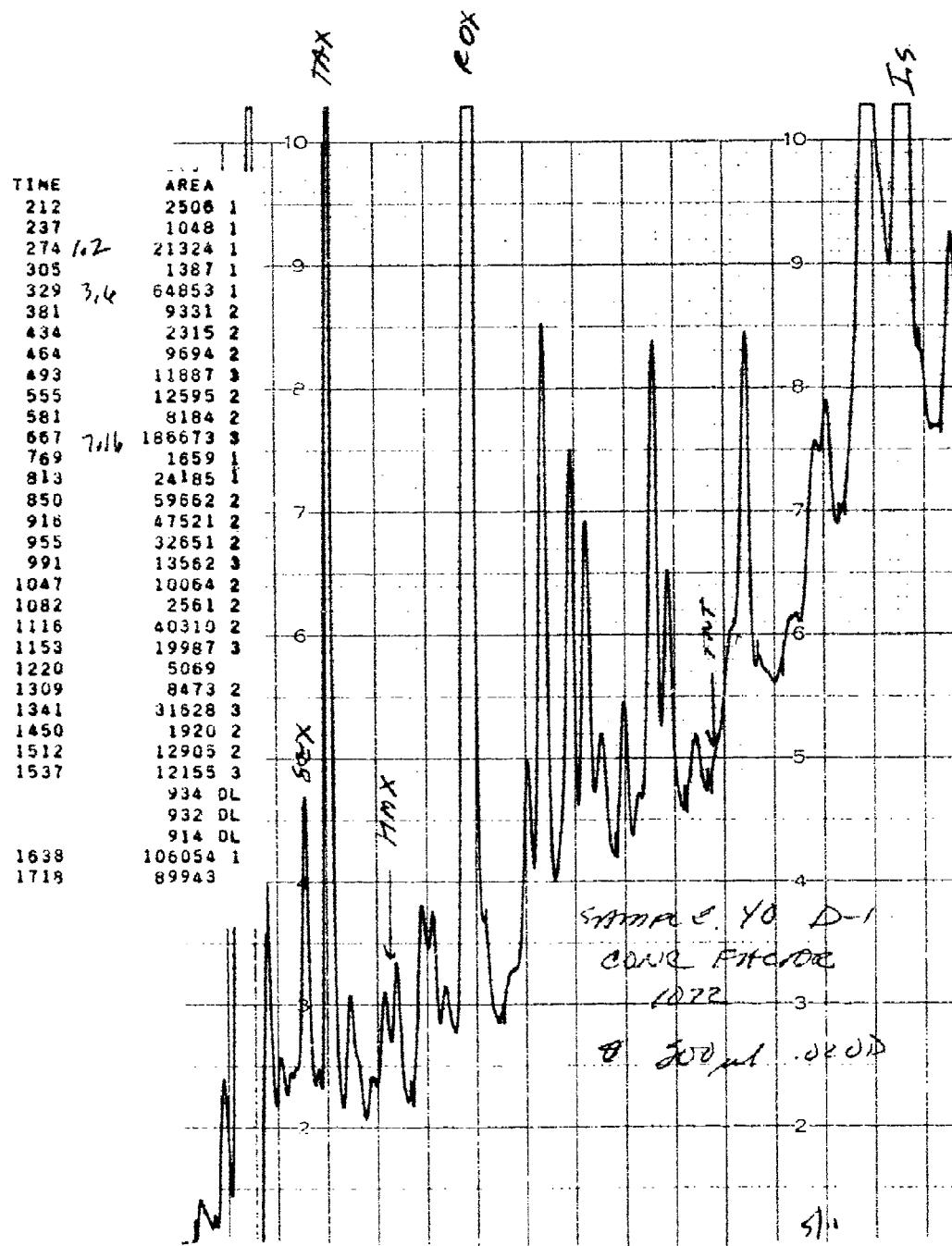
TIME
229
266
326
425
477
543

40
1/4
15391

607
668
754
804
840
879
938
1040
1078
1117
1141
1302
1345
1440
1550
1612
1649
1689
1737

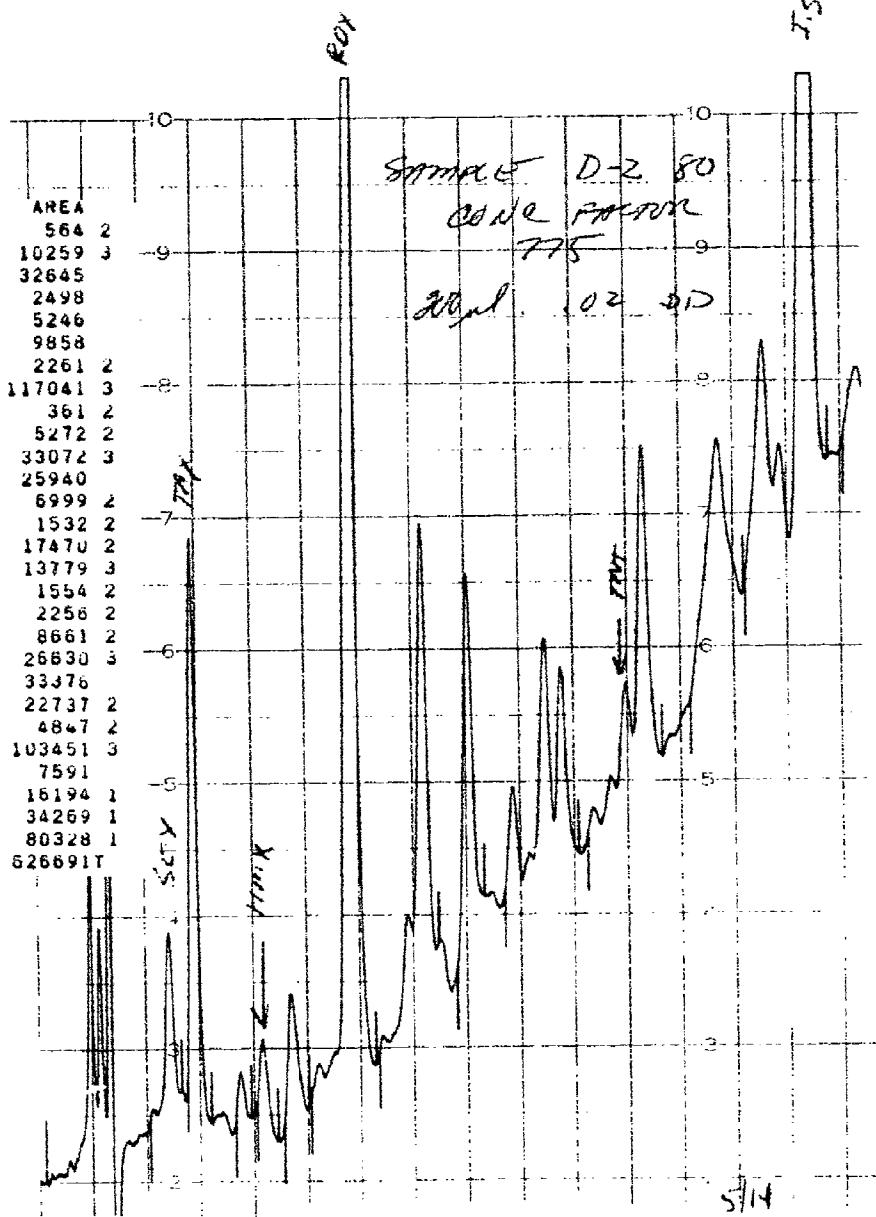
41
13122 2
85992 3
3374 2
17698 2
63386 2
3557 3
35086
10864 2
4895 2
26058 2
23895 3
4439 3
3146
31118
16479
1525 2
8142 2
7243 2
91713 3

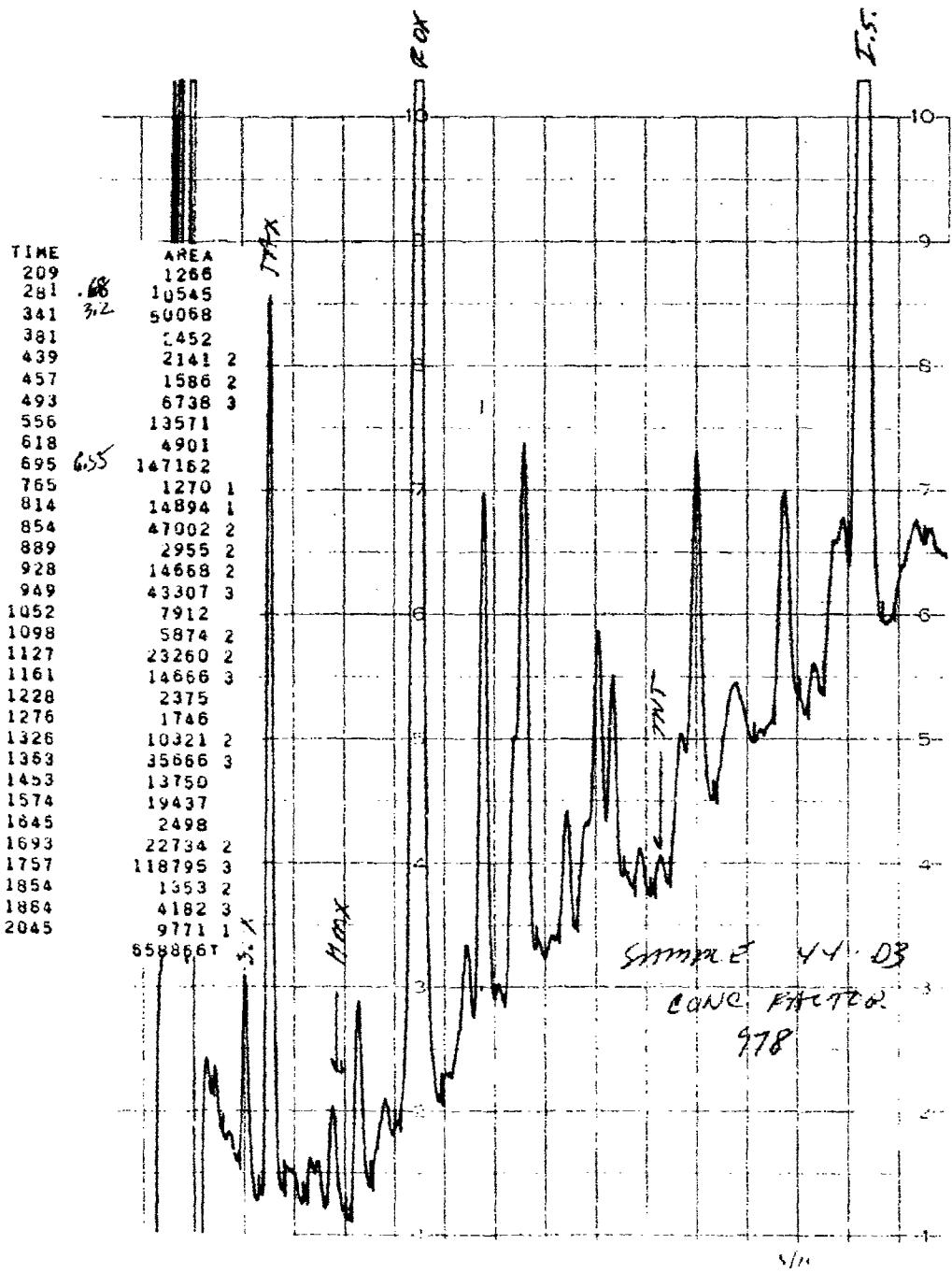




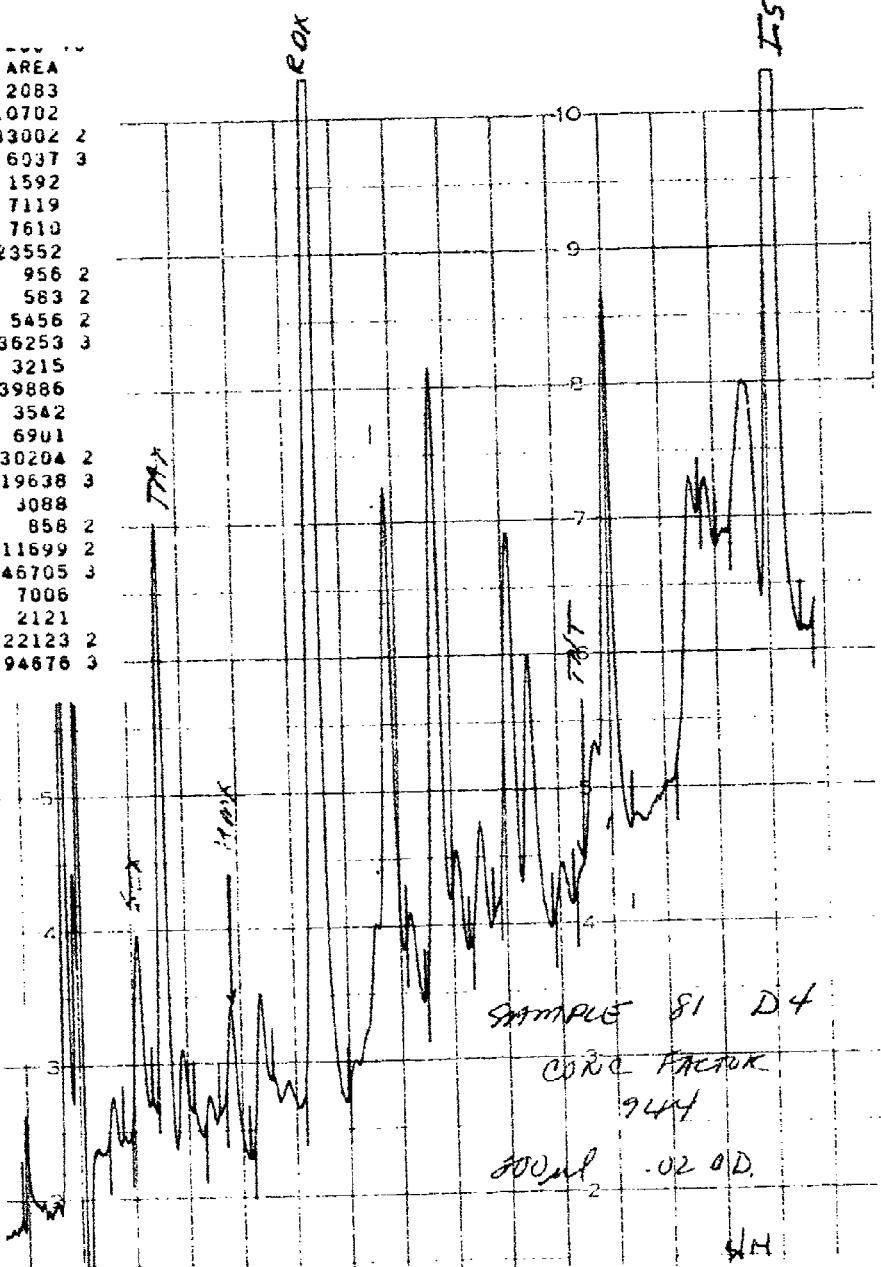
TIME AREA

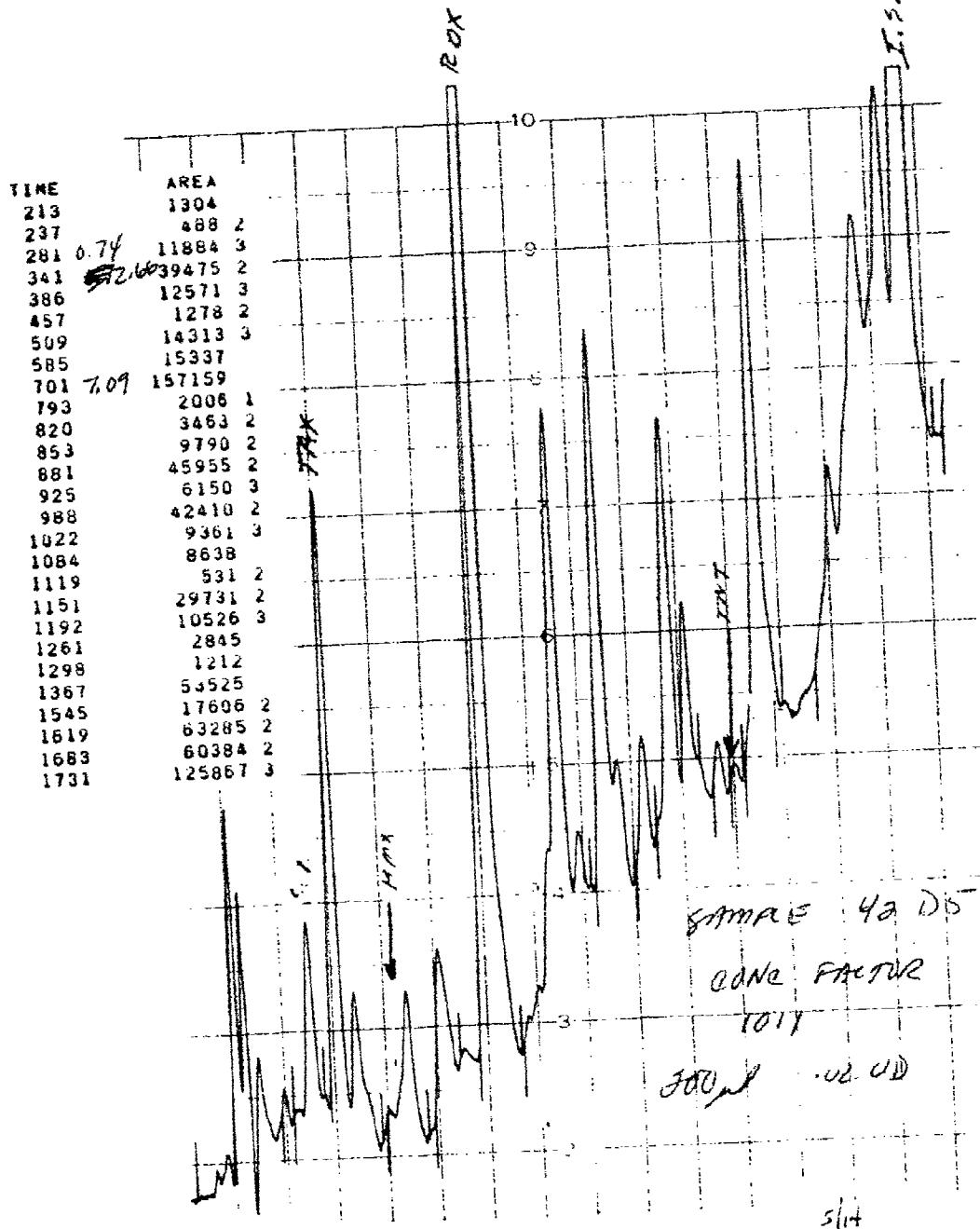
240	564	2
278	10259	3
335	32645	
439	2498	
489	5246	
555	9858	
613	2261	2
689	455	
	117041	3
760	361	2
816	5272	2
851	33072	3
953	25940	
1053	6999	2
1087	1532	2
1122	17470	2
1160	13779	3
1228	1554	2
1269	2256	2
1304	8661	2
1343	26630	3
1513	33376	
1615	22737	2
1652	4847	2
1709	103451	3
1823	7591	
1929	16194	1
2094	34269	1
2147	80328	1
	626691T	



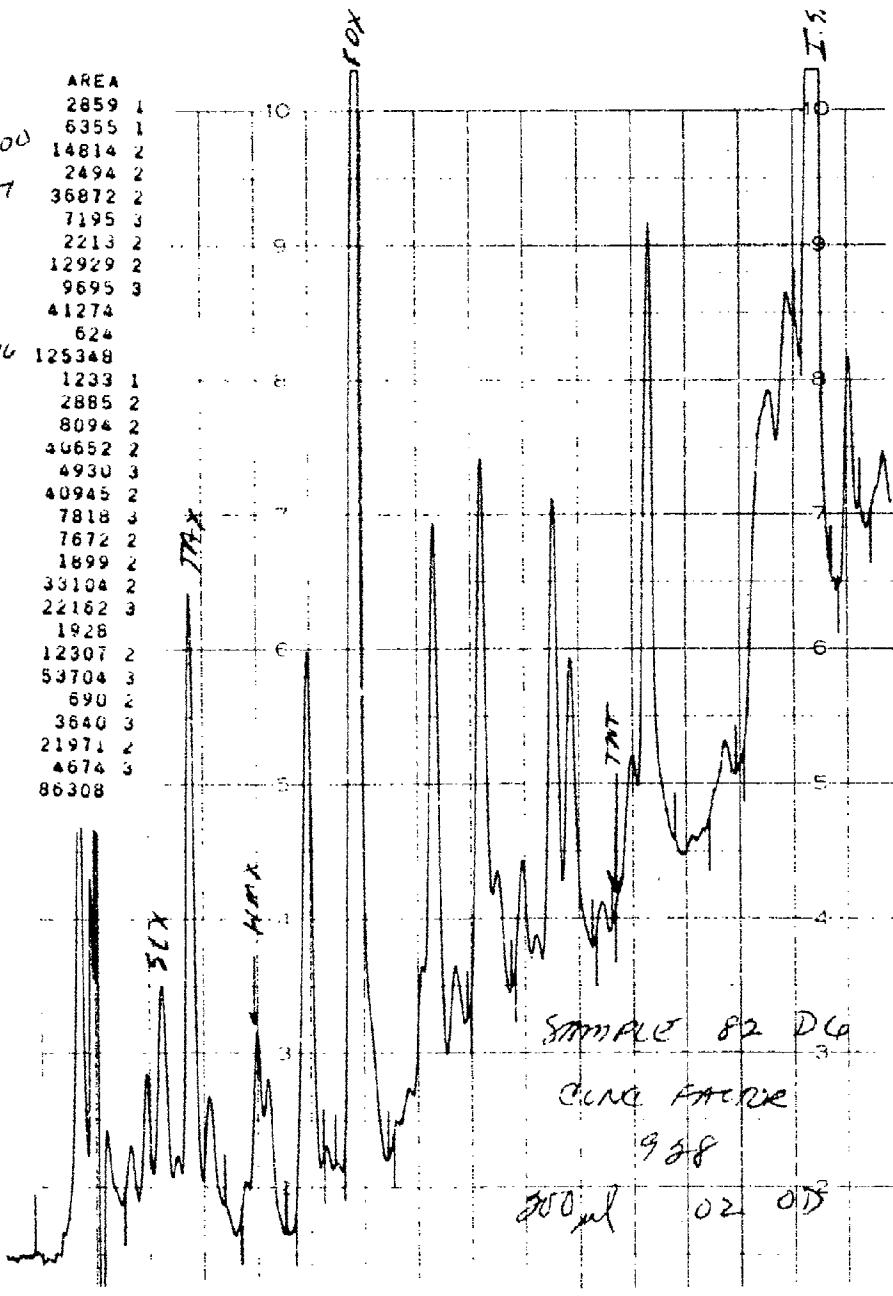


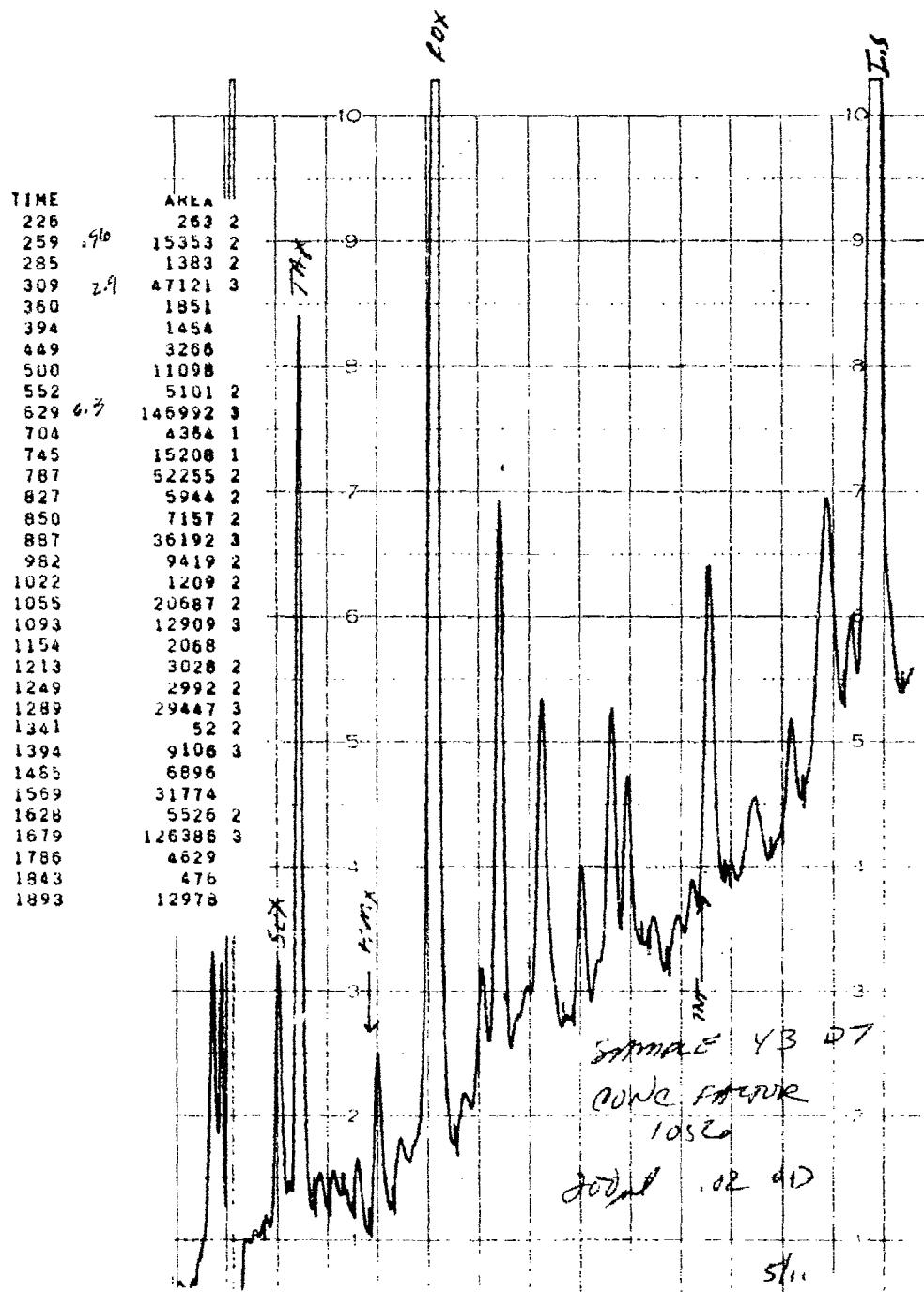
TIME	AREA
209	2083
270	10702
326	33002 2
369	6037 3
426	1592
478	7119
544	7610
673	6-63 123552
753	956 2
785	583 2
808	5456 2
840	36253 3
883	3215
945	39886
988	3542
1042	6901
1110	30204 2
1154	19638 3
1224	3088
1266	858 2
1300	11699 2
1337	46705 3
1525	7006
1559	2121
1645	22123 2
1712	94676 3

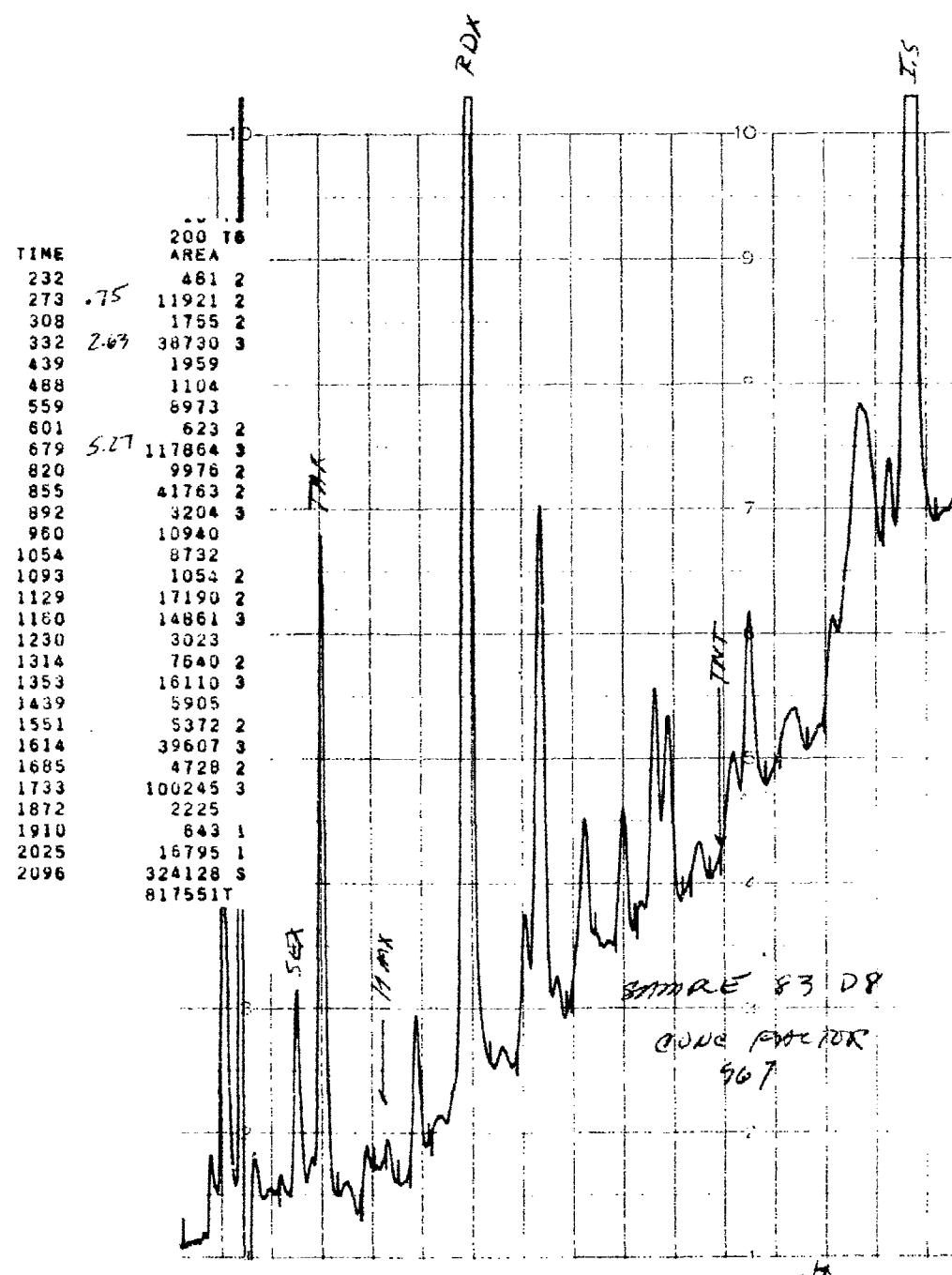




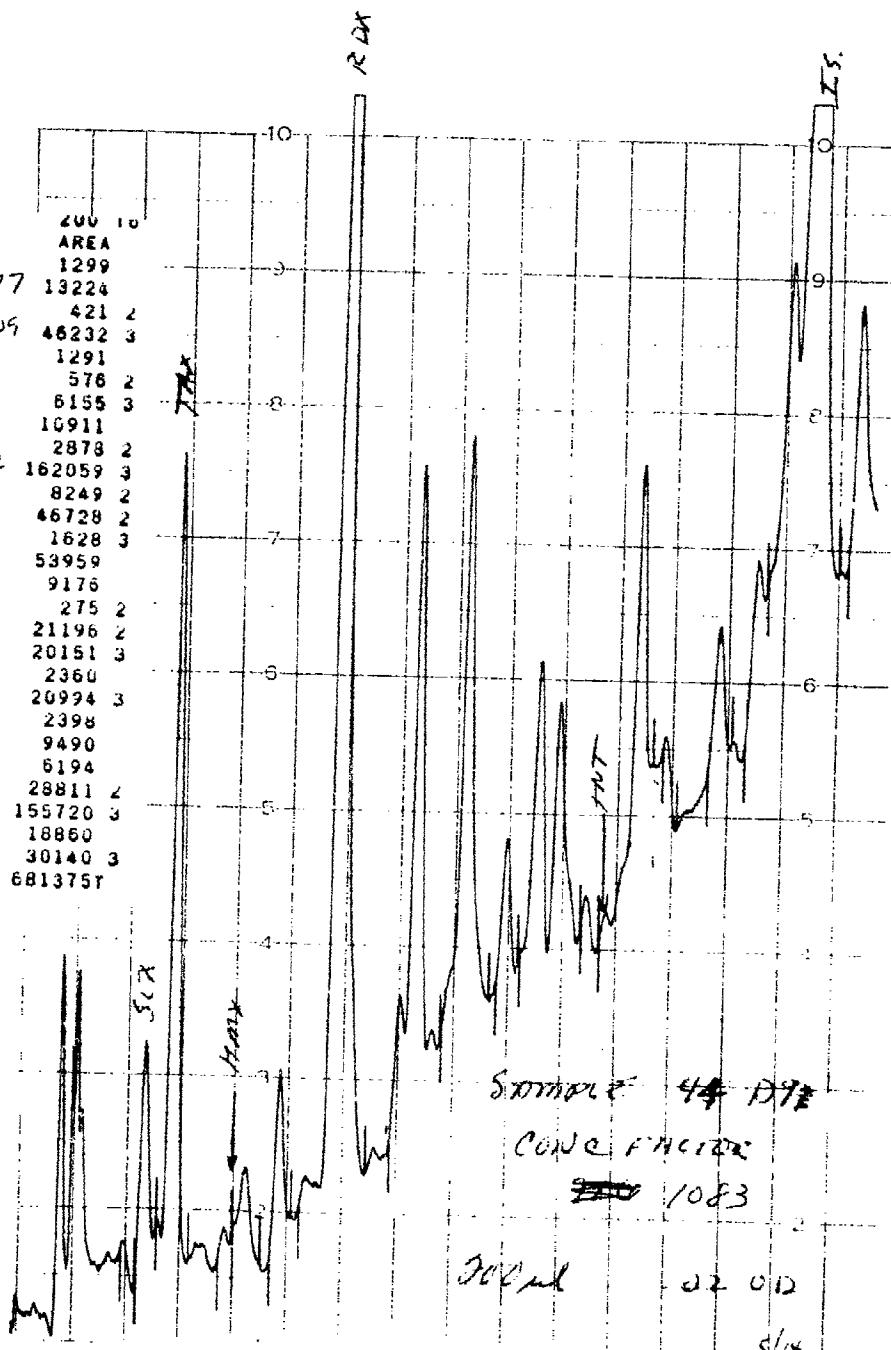
TIME	AREA
218	2859 1
255	6355 1
289	14814 2
321	2494 2
351	36872 2
394	7195 3
476	2213 2
501	12929 2
525	9695 3
616	41274
655	624
722	6.16 125348
816	1233 1
842	2885 2
874	8094 2
922	40652 2
948	4930 3
1009	40945 2
1042	7818 3
1101	7672 2
1130	1899 2
1169	33104 2
1208	22162 3
1277	1928
1344	12307 2
1381	53704 3
1531	690 2
1554	3640 3
1649	21971 2
1689	4674 3
1745	86308

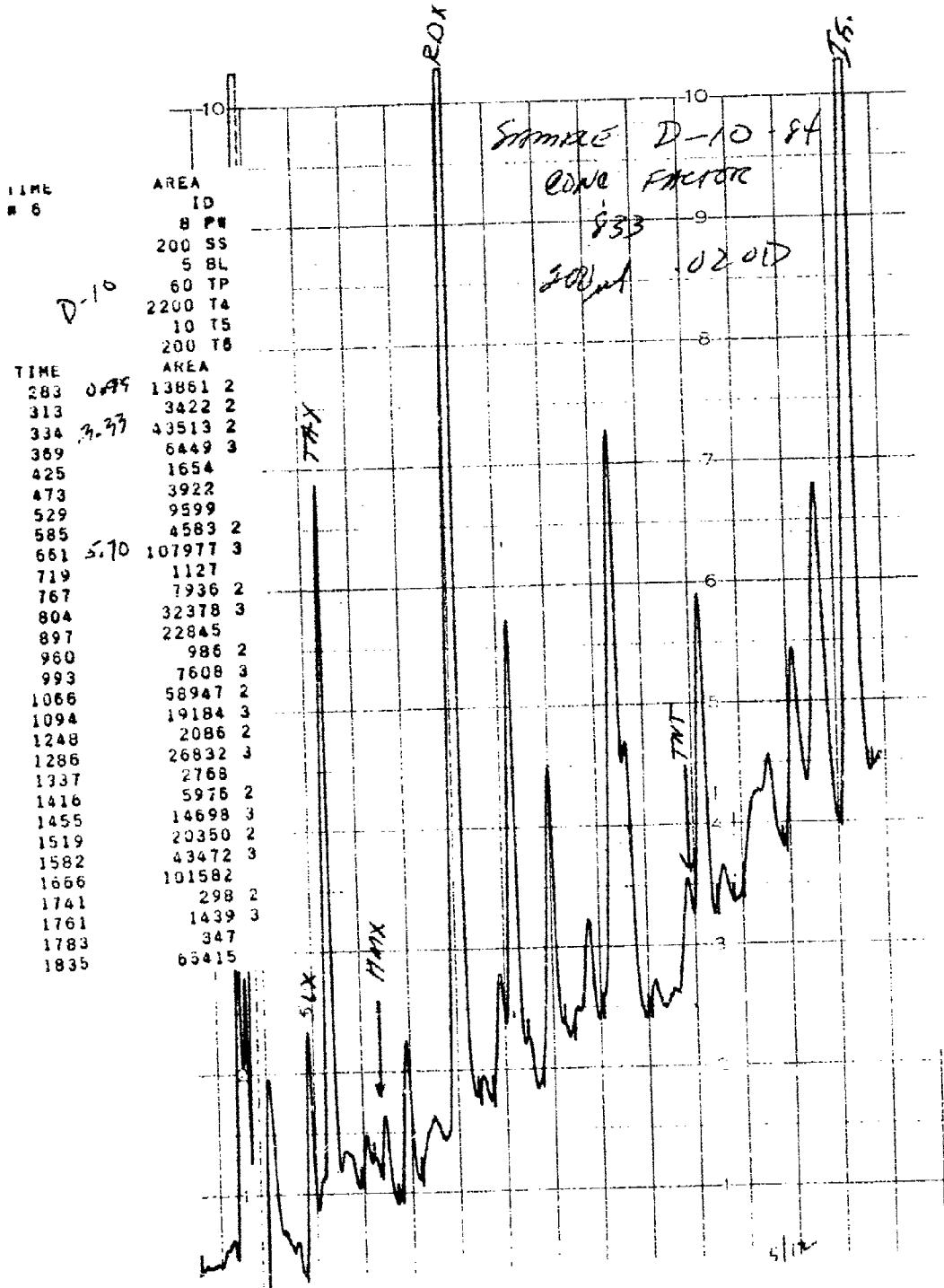




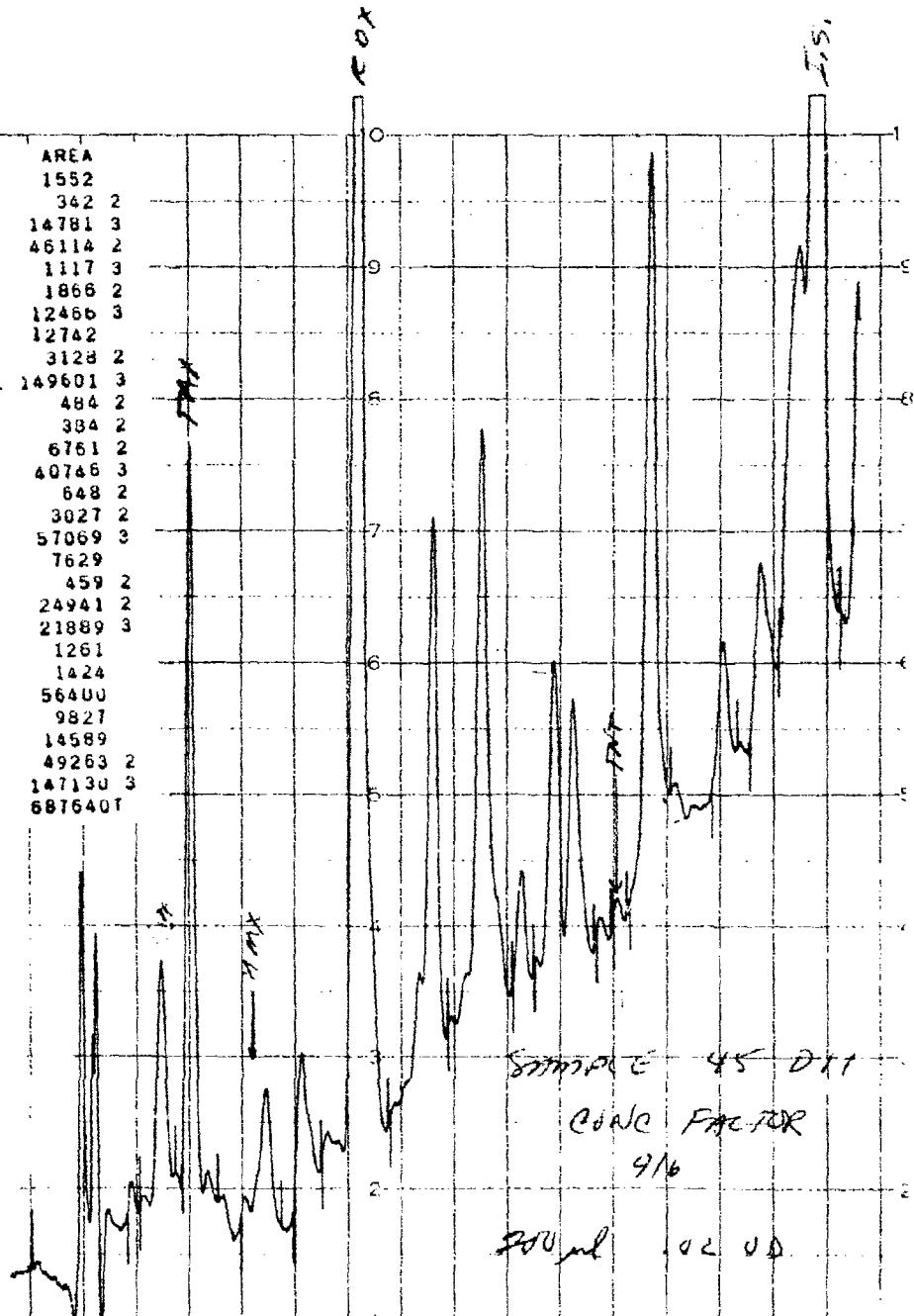


TIME
 249
 297 0.77
 326
 357 3.09
 477
 502
 524
 598
 655
 721 6.82
 862
 895
 934
 1004
 1097
 1132
 1166
 1211
 1273
 1387
 1444
 1561
 1642
 1707
 1761
 1863
 2089
 681375T

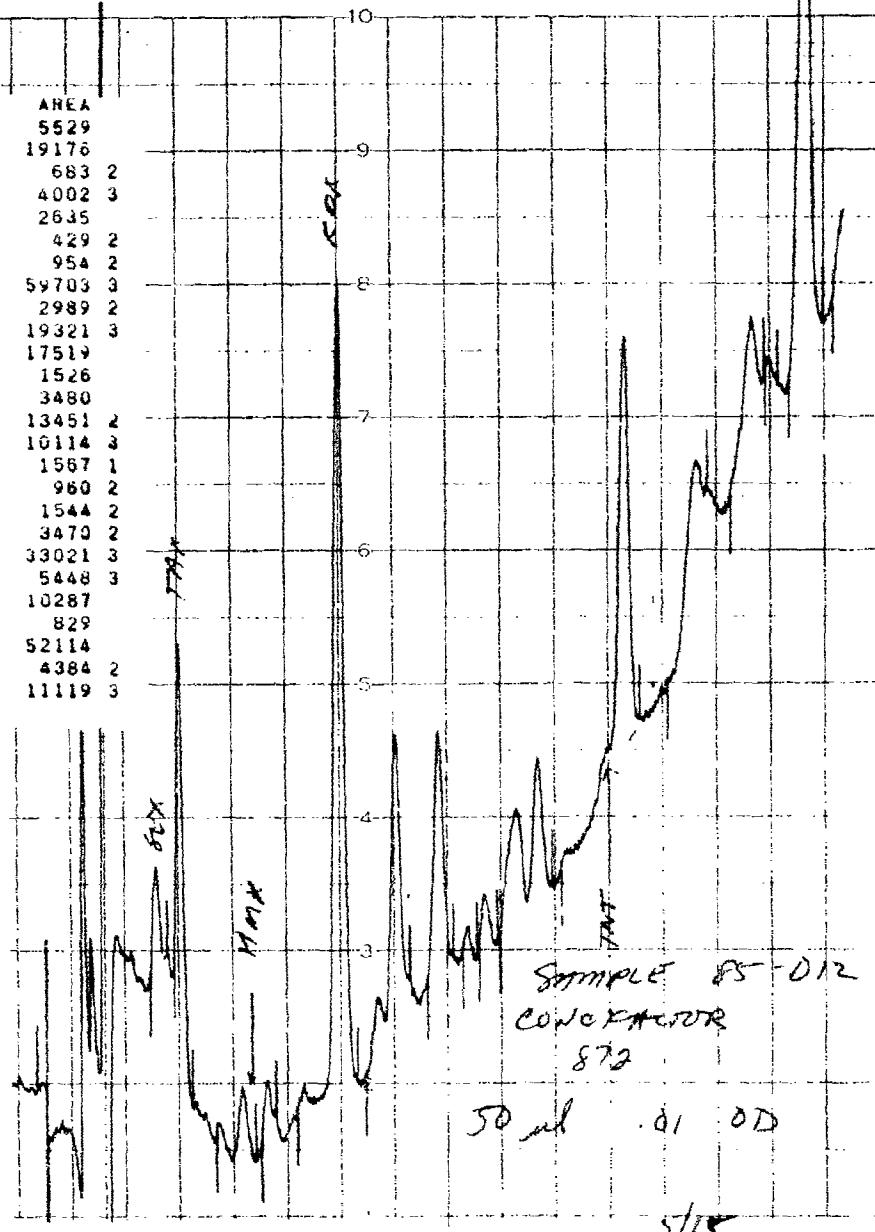




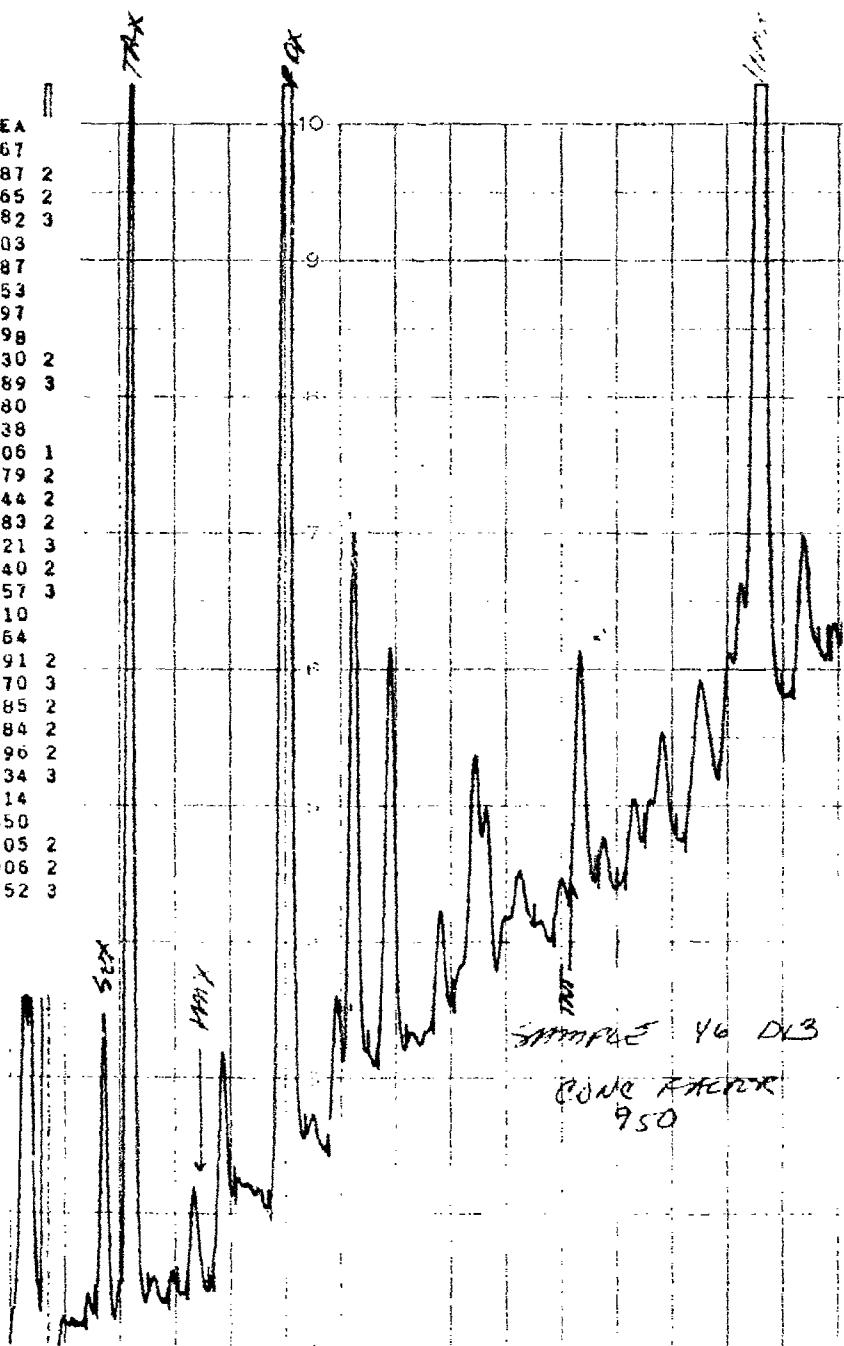
TIME	AREA
229	1552
253	342 2
299	14781 3
363	343 46114 2
403	1117 3
486	1866 2
536	12466 3
615	12742
672	3128 2
740 7.42	149601 3
821	484 2
846	384 2
880	6761 2
912	40746 3
953	648 2
987	3027 2
1023	57069 3
1113	7629
1149	459 2
1187	24941 2
1232	21889 3
1292	1261
1392	1424
1405	56400
1571	9827
1653	14589
1738	49263 2
1777	147130 3
	687640T



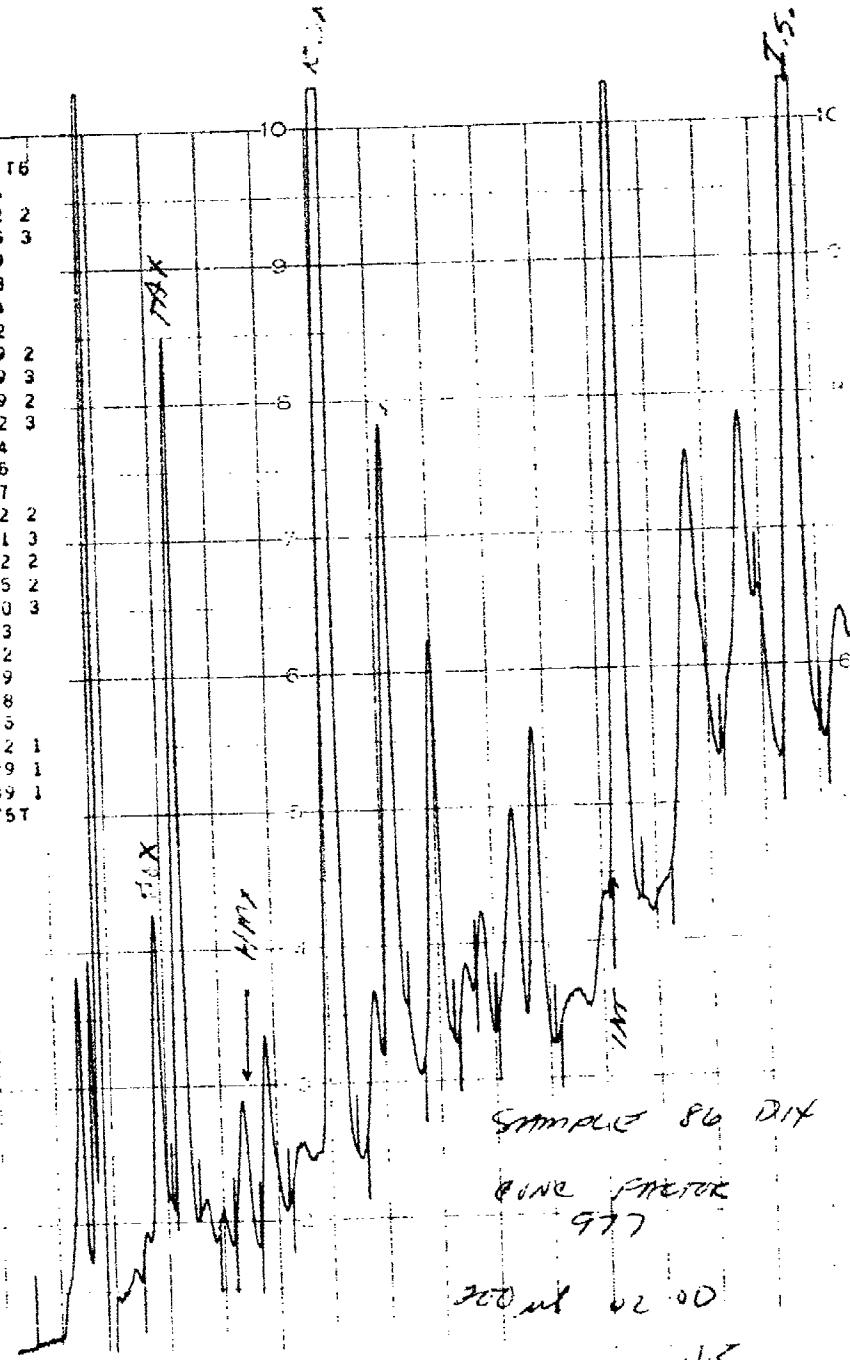
TIME	AREA
269	0.78
324	2.89
408	683 2
461	4002 3
519	2635
593	429 2
600	954 2
682	59703 3
770	2989 2
809	19321 3
907	17519
973	1526
1009	3480
1081	13451 2
1129	10114 3
1189	1567 1
1221	960 2
1258	1544 2
1283	3470 2
1321	33021 3
1481	5448 3
1607	10287
1643	829
1724	52114
1815	4384 2
1833	11119 3

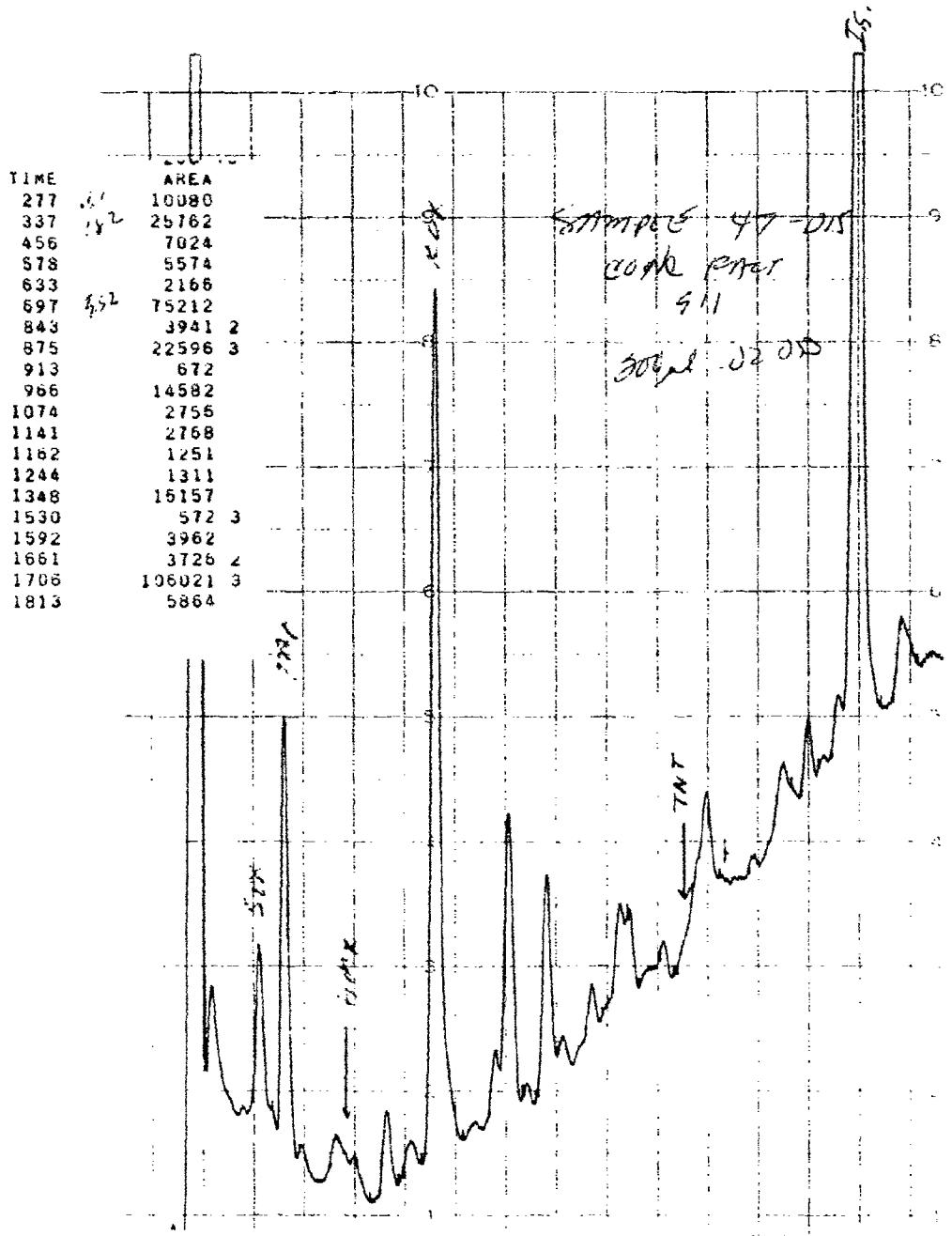


TIME	AREA
238	667
274	15287 2
310	1065 2
330	68282 3
423	603
472	6387
537	10353
565	2297
669	55 134098
784	8130 2
821	35889 3
900	29680
1012	6138
1055	1706 1
1086	17779 2
1109	9344 2
1150	2283 2
1183	5521 3
1274	3040 2
1315	18657 3
1368	2310
1433	3964
1470	1591 2
1497	7370 3
1581	15185 2
1642	7484 2
1669	12396 2
1706	111034 3
1806	9714
1869	1050
1910	22205 2
2008	32906 2
2063	2752 3



TIME 200 16
 AREA
 247 1302 2
 279 17796 3
 332 45129
 418 1318
 465 10574
 520 14362
 586 5579 2
 672 614 141249 3
 762 7939 2
 801 44032 3
 898 30164
 961 2826
 998 5557
 1070 21342 2
 1117 22351 3
 1182 1262 2
 1270 3245 2
 1309 76100 3
 1468 59653
 1585 21632
 1699 106289
 1793 8848
 1841 5595
 1929 6412 1
 2097 44329 1
 2180 14589 1
 7134757





TIME	AREA
242	1228
280	20387 2
309	1240 2
333	52353 3
429	2324 2
479	3914 3
541	12496
591	2397 2
669	165625 3
785	5830 2
821	47670 3
918	33494
973	2056
1008	5186
1041	880 2
1076	15411 2
1113	19328 3
1172	4374
1255	6817 2
1293	12274 3
1458	3523 2
1549	23933
1589	3843
1656	103376
1748	1303
1773	1261

POX

TS.

Sample 210 87

Curve fit 9

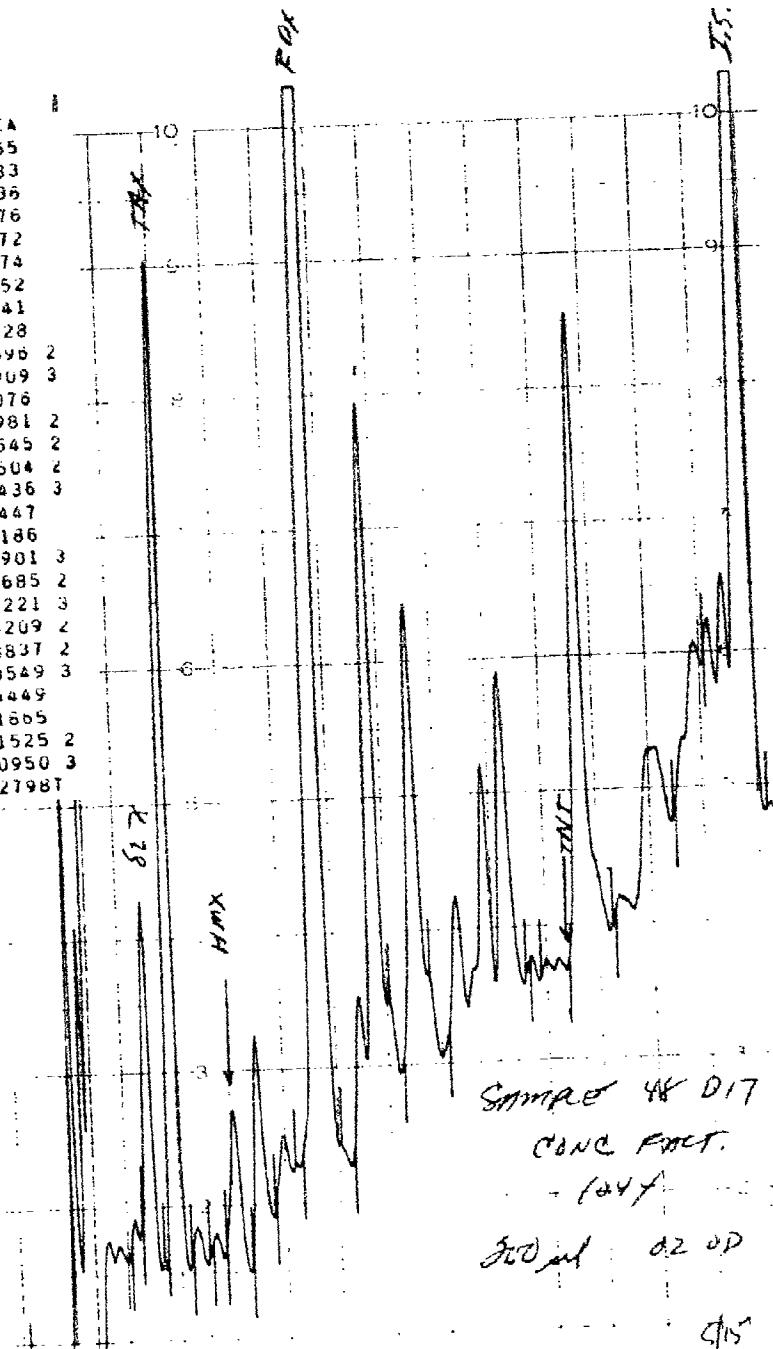
1072

200 sub 02.07

POX

TS.

TIME	AREA
245	865
280	19383
336	55836
385	2176
425	872
475	11074
531	13252
580	3841
671	77128
767	7096 2
802	42909 3
894	28076
968	9981 2
1024	2545 2
1054	18504 2
1097	26436 3
1153	447
1273	56186
1428	14901 3
1507	1685 2
1539	5221 3
1571	3209 2
1605	8837 2
1647	103549 3
1741	14449
1804	1865
1895	1525 2
2075	10950 3
	6427987



Sample 48 D17

conc fact.

-1047

20 ml 02 0D

415

TIME \sim AREA

216	860	2	
237	968	3	
273	1.1	21139	2
305	748	2	
328	2.8	52116	3
377	5296		
423	628		

449	893	2
480	14261	3
540	18076	
591	2723	2
616	4175	3
668	2.3	193719
745	1171	
797	18837	2
833	53924	2
872	2803	3
932	46602	
982	2571	1
1029	5449	2
1082	15454	2
1102	19912	2
1137	33914	3
1206	5507	
1261	311	2
1296	11642	2
1335	118859	3
1390	11437	
1569	34862	
1567	8991	2
1724	109697	3
1815	2344	2
1832	5925	3
1879	2846	2
1898	34395	3
1981	12317	

ROX

T.S.

ROX

Sample 88-D18

core factor.

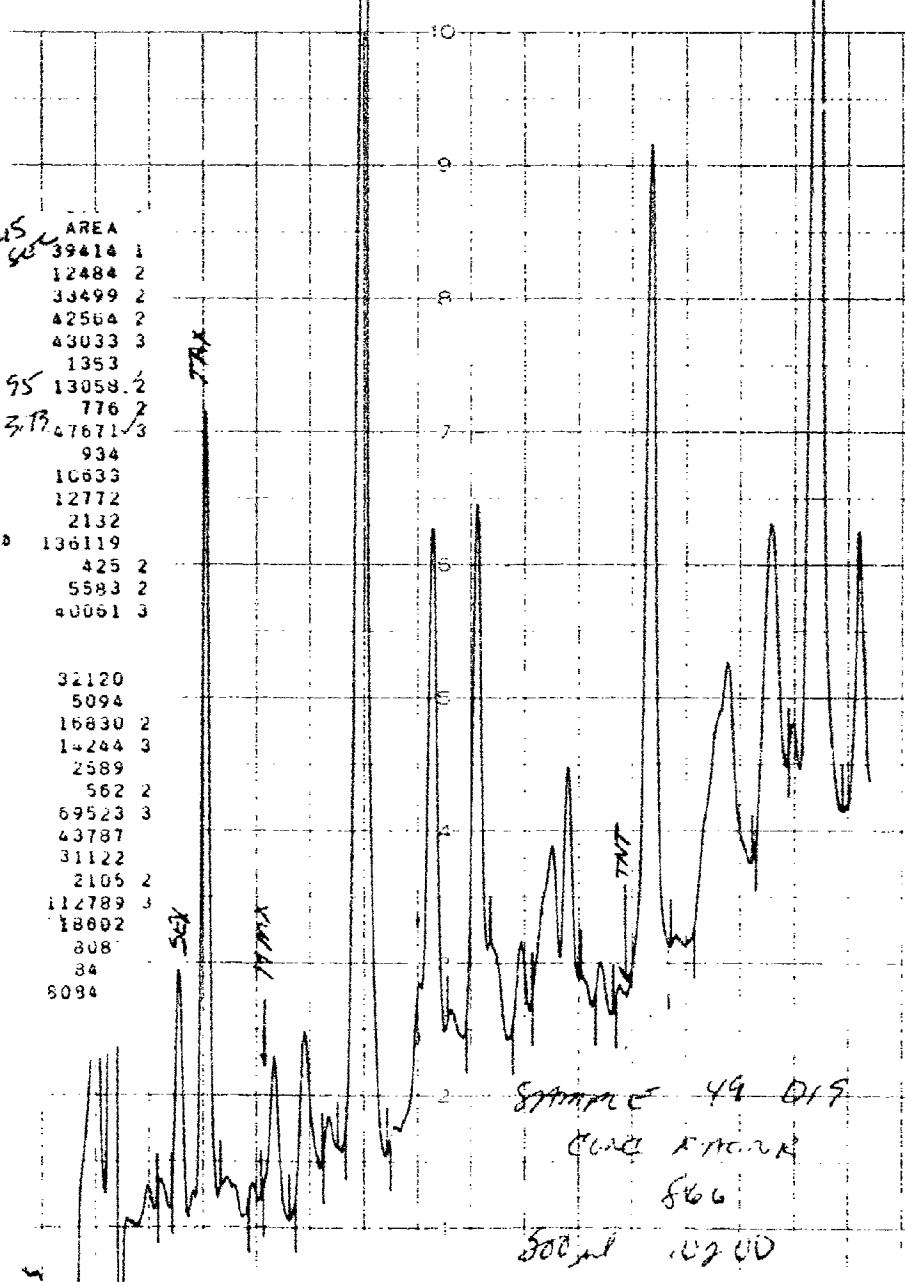
1058

200 ft. 0.2 0.0

571

TIME *215 sec* AREA
 320 39414 1
 348 12484 2
 360 33499 2
 368 42564 2
 435 43033 3
 464 1353
 505 595 13058 2
 536 776 2
 563 ~~3313~~ 47671 3
 670 934
 720 10633
 787 12772
 840 2132
 911 70 136119
 989 425 2
 1044 5583 2
 1074 40061 3

 1174 32120
 1273 5094
 1341 16830 2
 1379 14244 3
 1452 2589
 1493 562 2
 1561 69523 3
 1735 43787
 1833 31122
 1880 2105 2
 1930 112789 3
 2029 18602
 2103 808
 2149 84
 5084

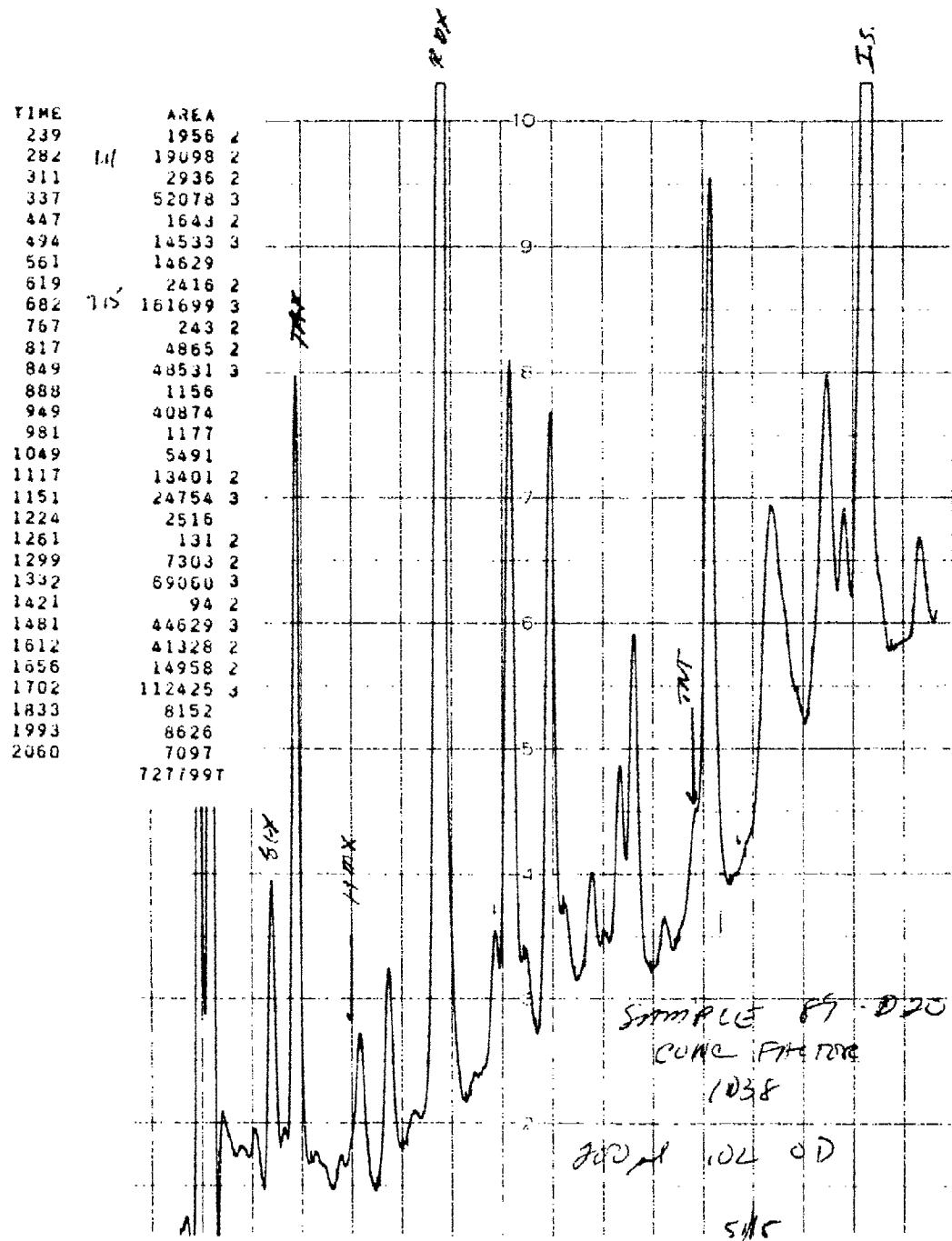


Sample 49 D19

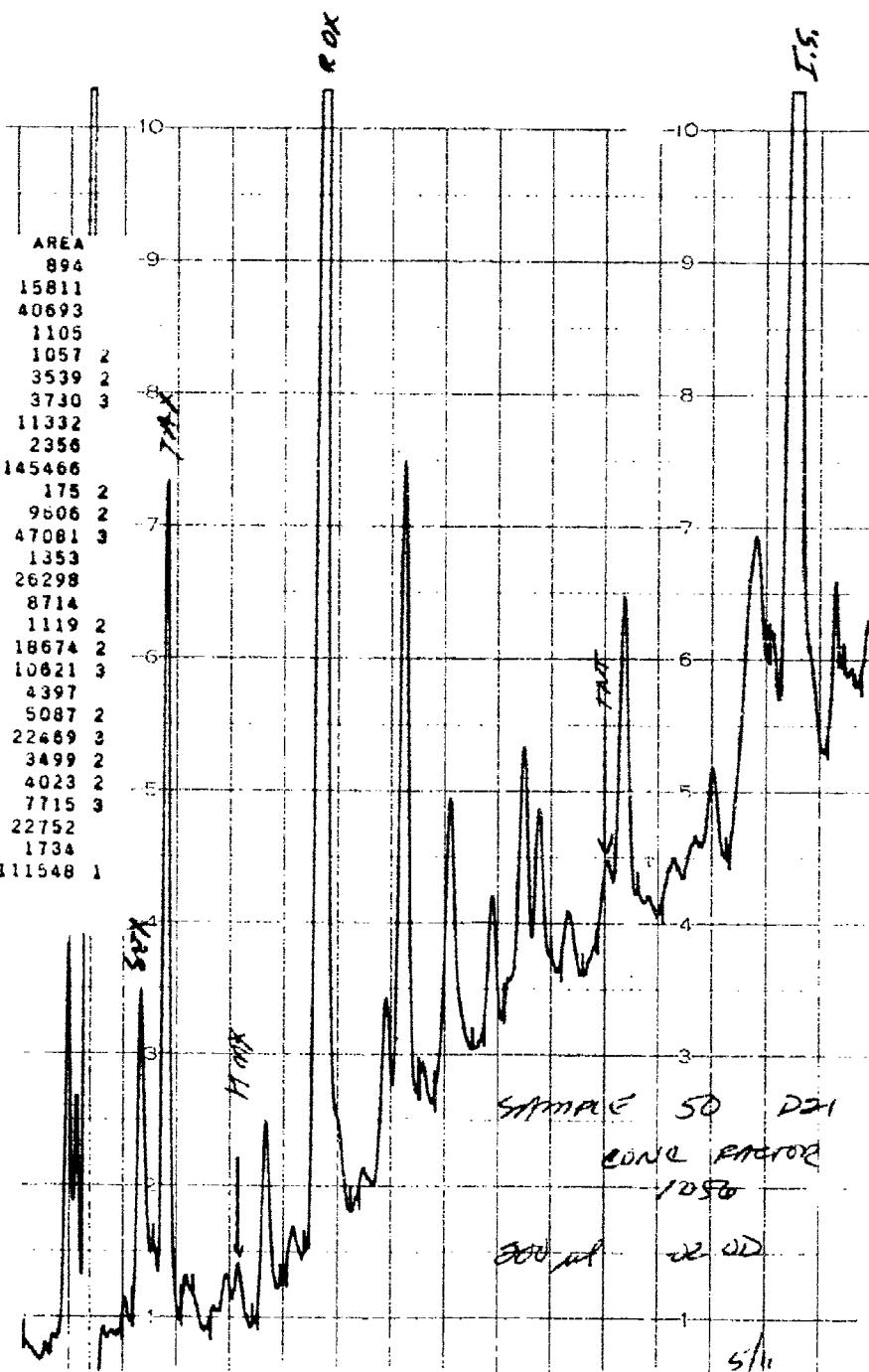
One mark

866

300 ft .0200



TIME AREA
 233 894
 268 15811
 322 40693 2.19
 369 1105
 428 1057 2
 460 3539 2
 487 3730 3
 550 11332
 609 2356
 670 5.38 145466
 769 175 2
 817 9606 2
 856 47081 3
 901 1353
 963 26298
 1058 8714
 1095 1119 2
 1129 18674 2
 1165 10621 3
 1231 4397
 1319 5087 2
 1356 22689 3
 1462 3499 2
 1510 4023 2
 1557 7715 3
 1652 22752
 1688 1734
 1735 111548 1



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